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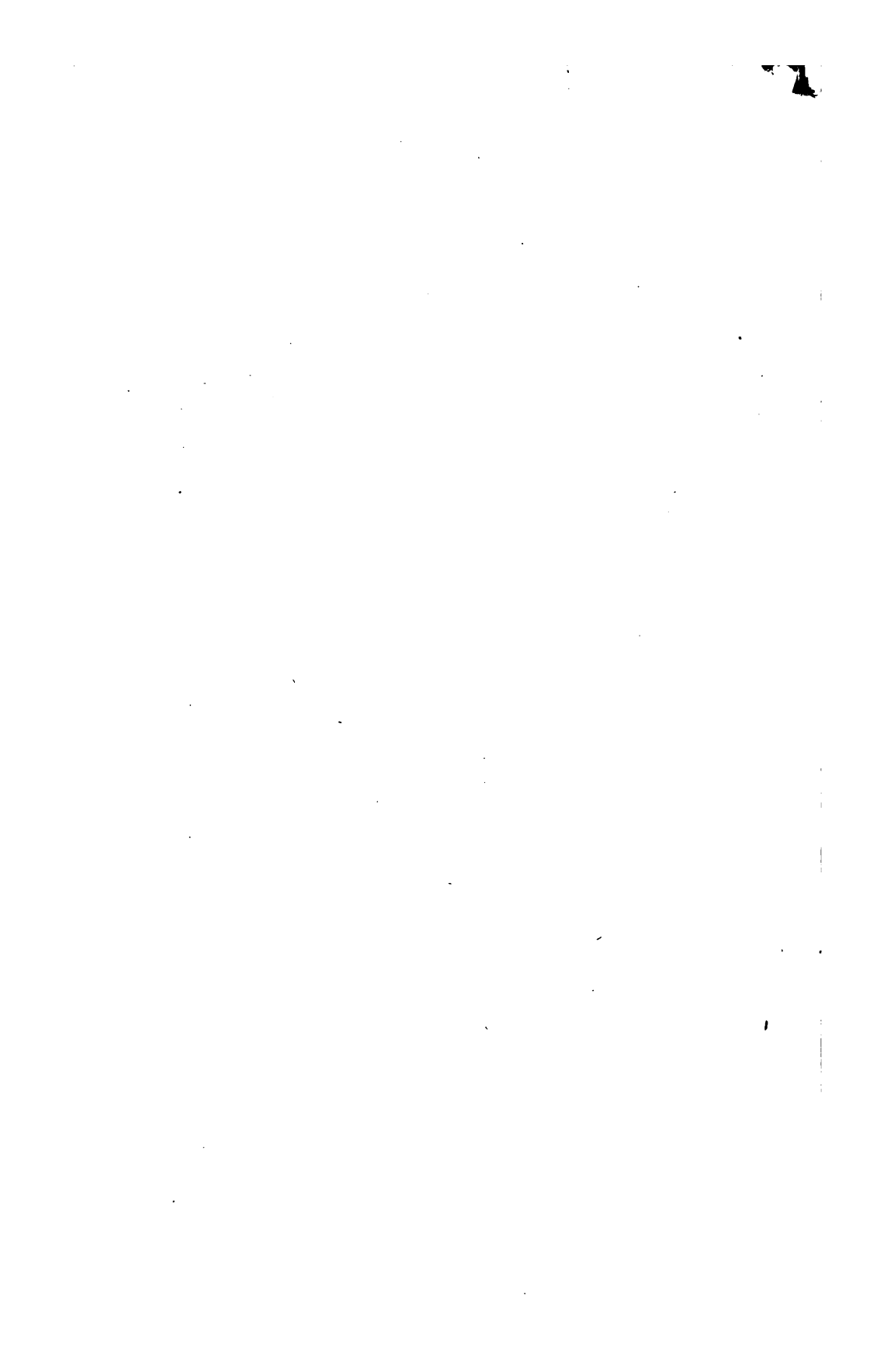
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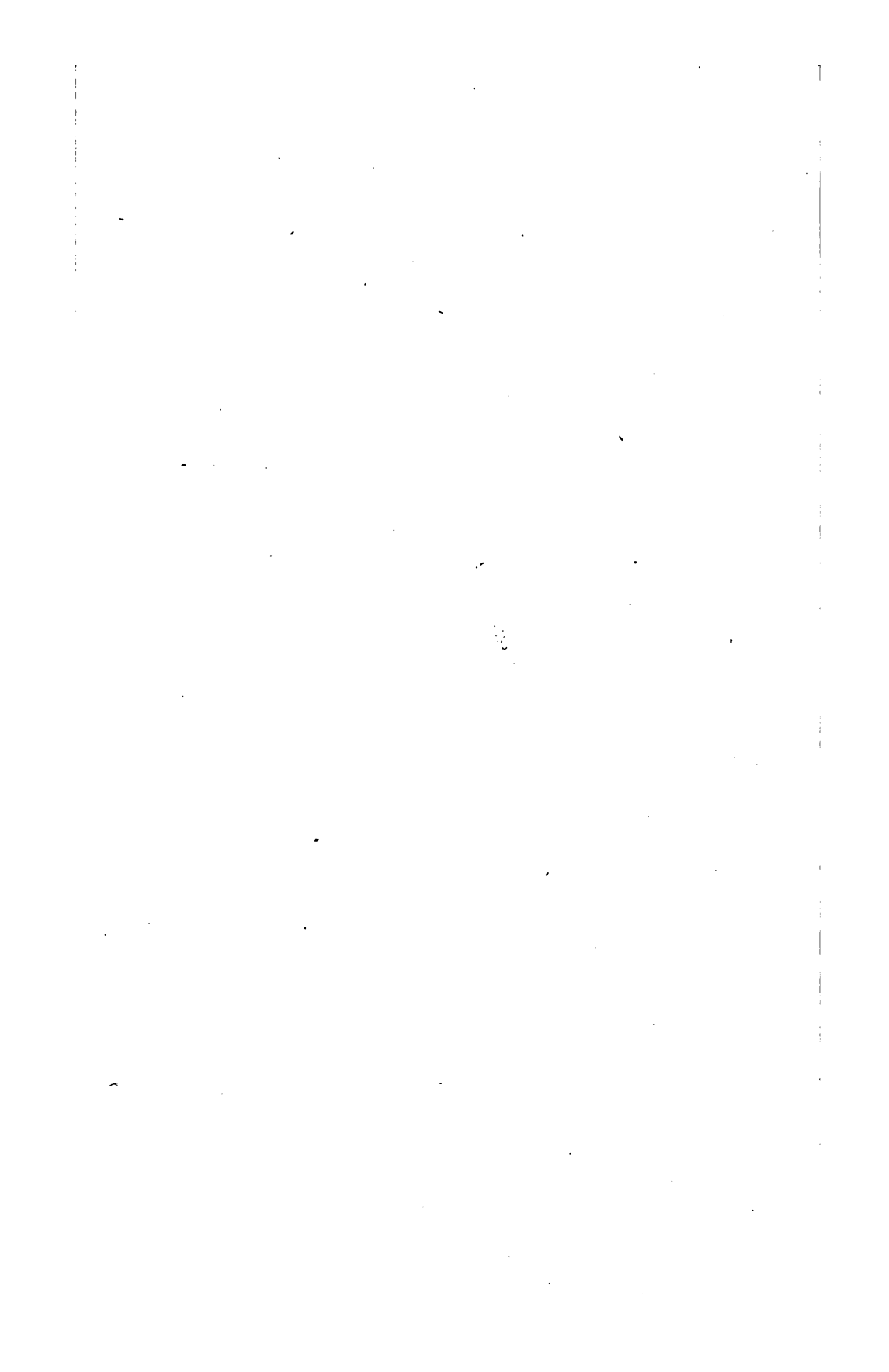












A MODERN AND PRACTICAL  
TREATISE  
ON THE  
DISEASES OF HORSES,  
HORNED CATTLE, AND SHEEP;

BY R. BOWERS:

COMPRISING AN EFFECTUAL METHOD OF CURING EVERY  
DISORDER TO WHICH THOSE ANIMALS ARE SUBJECT.

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ENTERED AT STATIONERS' HALL.

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LONDON:  
LONGMAN AND CO., PATERNOSTER ROW;  
AND  
R. STOKES, WORCESTER.

1838.

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## ERRATA.

- Page 114, for "Black Water continued," read *Diarrhœa*.  
 „ 116, for "Pulvis Opiv," read *Pulvis Opii*.  
 „ 167, for "Bannacles," read *Barnacles*.  
 „ 195, for "Bleeding," read *Breeding*.

## APPENDIX.

### RECIPE.—GOULARD'S EXTRACT OF LEAD.

Take Semi-Vitrious Oxide of Lead .. 2 pounds.  
Vinegar .. .. 1 gallon.

Mix, and boil it to six pints, constantly stirring; then set the Liquor by that the drugs may subside, and pour off the clear into a bottle.

### RECIPE.—SPIRIT OF CAMPHOR.

Take Gum Camphor .. .. 4 ounces.  
Rectified Spirit of Wine .. .. 2 pints.

Mix, that the Camphor may be dissolved.

### RECIPE.—SOAP LINIMENT OR OPODELDOC.

Take Soft Soap .. .. 1 pound.  
Gum Camphor .. .. 2 ounces.  
Proof Spirit .. .. 3 quarts.  
Strong Liquor of Ammonia .. 2 ounces.  
Oil of Origanum .. .. 2 drachms.  
Oil of Rosemary .. .. 2 "

Digest in a gentle heat until the camphor and soap are dissolved.

### RECIPE.—TINCTURE OF ASAFETIDA.

Take Gum Asafetida .. .. 4 ounces.  
Rectified Spirit of Wine .. .. 2 pints.

Macerate for fourteen days and strain.

### RECIPE.—TINCTURE OF OPIUM.

Take Gum Opium .. .. 2½ ounces.  
Spirit of Wine (proof) .. .. 2 pints.

Macerate for fourteen days and strain.

RECIPE.—COMPOUND TINCTURE OF MYRRH.

Take Aloes .. .. .	½ pound.
Calcined Ferri Sulphas .. ..	2 ounces.
Gum Myrrh .. .. .	4 “
Rectified Spirit of Wine .. ..	1 quart.
Boiling Water .. .. .	3 “

Macerate for fourteen days.

RECIPE.—TINCTURE OF EUPHORBIIUM.

Take Gum Euphorbium .. .. .	3 ounces.
Gum Camphor .. .. .	½ “
Myrrh .. .. .	1 “
Salt of Tartar .. .. .	1 “
Rectified Spirit of Wine .. ..	1½ pint.

Macerate for fourteen days.

RECIPE.—TINCTURE OF BENZOIN OR FRYAR'S BALSAM.

Take Gum Benzoin .. .. .	3 ounces.
Strained Storax .. .. .	2 “
Balsam of Tolu .. .. .	1 “
Extract of Spike Aloe .. .. .	½ ounce.
Rectified Spirits .. .. .	2 pints.

Macerate for fourteen days.

RECIPE.—TINCTURE OF DIGITALIS, (FOXGLOVE.)

Take of Foxglove Leaves dried .. ..	4 ounces.
Proof Spirit .. .. .	2 pints.

Macerate for fourteen days and filter.

RECIPE.—BLISTERING OINTMENT.

Take gum euphorbium two ounces, rubbed to a paste with turpentine; then add powdered lyttæ one ounce; sublimate two drachms; hog's lard eight ounces; oil of origanum half an ounce; spirit of turpentine a sufficient quantity to form an Ointment.

RECIPE.—LIQUID BLISTER.

Take Gum Euphorbium .. .. .	6 drachms.	} dissolve.
Powdered Lyttæ .. .. .	3 “	
Sublimate .. .. .	1½ “	
Spirit of Salts .. .. .	1 “	
Then add Spirit of Turpentine .. ..	2 ounces.	
Oil of Origanum .. .. .	½ “	
Rape Oil .. .. .	5 “	

Let the gum euphorbium be rubbed to a paste with a little of the turpentine. Where I have ordered euphorbium let it be the gum and not the powder as the action of blisters for horses principally depends on the euphorbium, which it is almost impossible to obtain genuine in powder: consequently in this state it loses part of its active properties.

**RECIPE.—LINIMENT OF ARUGINIS, (ÆGYPTIACUM.)**

Take French Verdigris	..	..	..	4 ounces.
Honey	..	..	..	1 pound.
Vinegar	..	..	..	1 pint.
Bole-armenian	..	..	..	$\frac{1}{2}$ pound.

Dissolve the verdigris in the vinegar; then add the honey and bole-armenian, and boil the whole to a proper consistence.

**RECIPE.—GREEN DIGESTIVE OINTMENT.**

Take Hog's Lard	..	..	..	2 pounds.
Yellow Resin	..	..	..	2 "
French Verdigris	..	..	..	3 ounces.
Spirit of Turpentine	..	..	..	3 "

Let the verdigris first be dissolved in the lard; then add the resin, and when removed off the fire, and not very hot, add the turpentine. If the ointment should be wanted thinner, more turpentine must be added.

**RECIPE.—YELLOW BASILICON.**

Take Hog's Lard	..	..	..	6 pounds.
Suet	..	..	..	3 "
Yellow Resin	..	..	..	8 "
Cera Flava	..	..	..	1 "
Palm Oil	..	..	..	1 "
Spirit of Turpentine	..	..	..	8 ounces.

Melt the whole of the ingredients over a gentle fire, then remove it from the fire, and when not very hot add the turpentine.

**RECIPE.—UNGT. EX ALTHACE.**

Take Hog's Lard	..	..	..	3 pounds.
Suet	..	..	..	1 "
Yellow Resin	..	..	..	1 "
Yellow Wax	..	..	..	10 ounces.
Palm Oil	..	..	..	$\frac{1}{2}$ pound.
Rape Oil,	a sufficient quantity.			



**RECIPE.—BLACK BASILICON.**

Take Common Pitch .. ..	2 pounds.
Black Resin .. ..	2 “
Hog's Lard .. ..	5 “
Spirit of Turpentine .. ..	8 ounces.

Melt the three first articles over a gentle fire, and when removed from the fire add the turpentine.

## INTRODUCTION.

A LONG and successful practice in the counties of Hereford, Worcester, Gloucester, Monmouth, and the Principality of Wales, with a sedulous attention to chemistry and the practice of medicine, has induced me to appear before the public.

Chemistry presents itself with all the attractions of a new science, yet with all the certainty of one established for centuries. We are enabled by its tests to ascertain the true nature of the blood, and to acquire clear and definite ideas of animal fluids. We are no longer perplexed in distinguishing the nature of mineral preparations and vegetable substances; their salutary consequences having been triumphantly confirmed by a long series of experiments, which constitute a new era in the history of medicine.

Medicine has been admirably simplified by the correct exposition of its properties and the acute discrimination of the ratio symptomatum, which requiring changes of treatment in the varying fluctuations of a malady, conformable to the indications, suggests to the practitioner the appropriate means of cure. Fortunately for the relief of those valuable animals which are noticed in this Treatise, almost every material alteration in the practice of medicine has in recent times terminated in improvement. This is as it should be. The destruction of any one system, unless it were possible to substitute another of superior utility, must be reckoned among those evils which the restlessness of the human intellect has so abundantly multiplied from the earliest ages. The impracticability of creating a beneficial change in the whole of that extensive circle of the sciences connected with medicine, unless by an imitation of the slow and gradual operations by which the great Author of nature effects improvements in the moral and physical universe, is so evident to every philosopher, that he naturally attaches the idea of extreme arrogance, or extreme folly, to the chimerical councils of those who are

guided by a different principle. The ratio medendi can only be improved by that philosophical acuteness and clinical fidelity which have immortalized many names. The formation of momenclatures, with all the fanciful hypotheses of system-mongers, will be forgotten with their authors; while the sagacious industry of those who patiently explore the paths of experimental inquiry, and a regular and progressive series of professional experiments, hold out the cheering hope of at length arriving at the head of that celestial spring which clothes the field of science with perpetual verdure.

A complete knowledge of the diversified symptoms and cure of the various diseases contained in this Treatise, can only be attained by a long and successful practice—such as, without arrogance, I hope I may justly lay claim to. I have been requested to send this publication to the press by a number of friends, gentlemen farmers, graziers, and others, who are of opinion that the Work will be of important service; for if strict attention be paid to the rules laid down in this Treatise, any person will understand the disorder; and by applying such

medicinal recipes as are prescribed, with genuine drugs, will be enabled in the most obstinate cases to effect a perfect cure.

I cannot too strongly impress upon the mind of my friends the necessity of having genuine drugs and chemicals, as well as adhering to the various methods herein mentioned for extracting or retaining their virtues. Without attending to this, the most valuable recipes may be rendered abortive. I shall now briefly state what is contained in this Treatise.

1. A concise description of every disease, with the best method of treating the same in every stage.
2. The proper method of compounding the different medicines and regulating their doses, suitable to age and size.
3. A number of valuable recipes, which have not been before published, embodying the most recent and most important discoveries.

Cattle of every description are valuable in every clime, but more so in this than any other country ; for if a poor man lose a horse or cow it frequently ruins him. In nine cases out of ten however, if proper remedies were administered, such a misfortune would not occur: and as I firmly and conscientiously believe that scarcely a respectable family will be without this Treatise, they will thus be enabled to save the life of many an animal for their poorer brethren. It is the interest of every farmer and grazier to make himself acquainted with the different diseases to which horses, cattle, and sheep are subject, their symptoms and treatment, which will be found in this Treatise to be attainable by the easy method which the Author has laid down. Medicines wrongly applied, or not given in sufficient quantity, increase the malignity of many diseases, while too large a dose endangers life itself. By strict attention to the following rules, most individuals will be enabled to act with propriety and judgment.

Diseases that require more than ordinary care are discussed at considerable length, such as red

water, downfall of the udder, fevers, &c. A part of this work is devoted to the description of diseases incident to young calves, with the most appropriate medicine adapted for each ; also, an important Treatise on Sheep, containing their different diseases, symptoms, and method of cure. In this Work all superfluous matter is omitted, and nothing but the nature and symptoms of every disease clearly pointed out ; together with the most modern and practical recipes for its cure ; so that persons of moderate abilities may in a short time acquire sufficient knowledge to practice therein.

As neat cattle constitute a very considerable part of national wealth, I shall make a few observations on their different varieties, and the selection of stock for farmers.

The names commonly in use, which are given to these animals, are those of neat or black cattle, which include both sexes, as the ox, bull, and cow : Their generic characters are as follows :

Cloven-footed, with or without horns, horns bend-

ing out laterally, eight cutting teeth in the lower jaw and none in the upper ; skin along the lower side of the neck pendulous ; round horns, with a large space between their bases. Neat cattle are called by various other names, as the *Urus Auroch*, a common name for a bull in the temperate climates ; and the *Bison* or *Bull*, a native of hot countries.

Neat cattle deserve a prominent rank in the animal creation, when we consider their utility, and the variety of productions they afford for the support and use of mankind. The different kinds are so well known by every family, that it would ill accord with the object of this Work to write, as many authors have done, a lengthened description of them.

The form or construction of these animals varies according to the climate : but our present object is the consideration of the breeds of our own country. It is to be regretted that farmers in general are so full of confidence in the respective breeds which are best adapted to their farms ; and that prejudices thus deeply seated are so difficult to eradicate. There is, notwithstanding, a considerable number of



gentlemen graziers, in most counties, who, much to their credit, have made great improvements in the breed of neat cattle.

The Herefordshire cattle, which are of a very superior description, have been introduced in several counties ; particularly in Breconshire and Radnorshire. They may also be seen grazing in the fertile fields of Ireland and Scotland ; and some of the finest Herefords have crossed the Pacific Ocean to New South Wales, a distance of 15,000 miles, where they are thriving well. Indeed, that worthy gentleman, T. Parsons, Esq. of Presteign, has lately sent some of the best that could be obtained to Van Diemen's Land. They have also been sent to many other British colonial possessions.

Such cattle as are intended to be reared for the dairy, or to fatten in the pasture, ought to be bred from cows of good make and shape, which have been got by a bull of the same description. The shape and make of the male are in most countries sought for, and found to be equally as necessary as the choice of an entire horse for mares, or a ram

for ewes. When farmers first enter upon a farm they should make themselves acquainted with the nature and quality of the soil; whether it be adapted for the breeding or rearing of stock, for keeping a dairy, or for stock for the shambles. It rarely happens that cattle purchased from rich lands do well on poor soils; but on the contrary, those taken from poor farms, in general thrive and do well on good land. The choice of neat cattle, therefore, for the stocking of farms should be regulated according to the quality and nature of the soil. The age of neat cattle should be understood by every person who has to do with them: they as well as sheep have no teeth in the upper jaw; the age therefore must be determined by the lower jaw. When two years old they get two new corner teeth, and every succeeding year they get two more, until they are five years old; when six, they become full-mouthed, the last two being completely up.

There is another method by which the age of neat cattle may be known, viz. by the horns. At the age of three years their horns are smooth and even; and every succeeding year there is a circle

or wrinkle round the basis near the head, which keeps moving the other forward ; so that if the first wrinkle be stated at three years old, it will be easy to tell the age of any beast after that time.

Young cattle are best understood by the following names:—The bull, while sucking, is called a bull-calf ; and from one to two years old, a stirk or yearling bull ; every year after he is called a bull of three, four, five, and six years old ; after which period he becomes aged. A young castrated male, after the first year, is called a stot calf or stirkstot, and then a steer ; at four years old he receives the name of a bullock. A female at the first is called a quey calf ; and a heifer till the age of four years ; she then takes the name of a cow, which is retained as long as she lives.

As soon as neat cattle arrive at the state of maturity they receive the name of ox, bull, and cow. There is a regular time of gestation amongst the females of different animals ; a cow goes nine months in calf, sometimes a week more or less ; a mare goes eleven months, a sheep five months, a

sow one hundred and fifty days ; these may vary a few days more or less. They should be attended to about the regular time of parturition, in order that every assistance may be rendered that nature may require.



## SECTION I.

### DIRECTIONS FOR THE MANAGEMENT OF HORSES.

THE best method of treating horses is not to bleed or purge them, except in cases which evidently require such operation. A horse's food chiefly consists of grain and herbage, which if good in quality, and given with judgment, not omitting proper exercise and dressing, will secure him from those complicated disorders to which he is subject by improper treatment. When horses are in good health many individuals bleed them, thinking by such means to improve their condition; but experience has proved the fallacy of such a course, as it only tends to weaken the animal. The loss of blood in the veins is supplied with a great portion of water and air; thus causing a deficiency of oxygen in the blood; lumps, or cutaneous eruptions make their appearance on various parts of the body, the animal becomes weak in constitution and unkind in appearance; the whole system is indeed more or less affected by its injurious consequences, and old horses and such as are in low condition are particularly affected by this practice. Human beings frequently fall victims to it.

## SECTION II.

### BLEEDING WHEN USEFUL.

PHLEBOTOMY, or bleeding, is useful when horses are highly fed and stand the principal part of their time in the stable, and have little or no exercise; and when the legs become swollen

or the eyes inflamed; and in fevers, which are always attended with inflammation; in falls, bruises, hurts of the eyes, and strains. The following powder, for cooling and purifying the blood, will be found highly serviceable:—

Take Antimonial Powder,	..	..	..	4 ounces.
Flower of Sulphur,	..	..	2	“
Powdered Nitre,	..	..	4	“

Mix, and divide in six parts: let one powder be given every night, in a mash of scalded bran or oats, or a feed of corn, moistened with a little water, to prevent the horse's blowing the powder.—Another recipe:—

Take Crocus of Antimony, finely levigated,	..	4 ounces
Flower of Sulphur,	..	8 “
Nitre in powder,	..	4 “

Mix, and divide into sixteen parts: let one powder be given every night and morning, in a mash as ordered in the first recipe. These two preparations are excellent for a horse in the spring of the year, if given him as directed, for two or three weeks: it will keep his body cool, acting as a safe but certain alterative, and removing his old coat.

FOR A HORSE IN AN UNKIND, WEAK, LOW STATE.

Take Diaphoretic Antimony,	..	..	2 ounces.
Tartarized Antimony,	..	..	1 “
Flower of Sulphur,	..	..	4 “
Nitre in powder,	..	..	4 “
Pepper or Ginger, in powder,	..	..	1 “
Carraway Seeds, powdered,	..	..	2 “

Mix the whole together, and let a table-spoonful be given every night in a mash. It will be necessary to take a little more care of the horse than usual while administering this medicine, so as to prevent his taking cold.

## SECTION III.

## ON PURGING.

PURGING is highly proper for horses of gross and full habit of body; more especially for those which lose the tone of the stomach, by over-feeding, or a load of ingendered crudities in the stomach; or for worms, grease, &c. [See Grease and Worms elsewhere.] Before a purge is given the body should be prepared by giving mashies of scalded bran and oats, and warm water, for two or three days previous to giving the ball. By this treatment a gentle action of the bowels will be promoted, and the medicine will not meet with any obstruction.

If very strong drastic purges are given to horses of costive habit, they will in some instances occasion inflammation. Notwithstanding the large tract of bowels through which the medicine has to pass, which is upwards of thirty yards, and that the time it lies in the bowels is seldom less than twenty-four hours, we may conclude that if the above direction for preparing a horse for physic be observed, danger will rarely ensue.

## FOR THE PURGING BALL:

Take Barbadoes Aloes, .. .. .	6 drachms.
Salt of Tartar, .. .. .	2 "
Ginger, .. .. .	2 "
Oil of Cloves, .. .. .	20 drops.
Soft Soap, a sufficient quantity for a ball.	

This ball will be strong enough for the generality of saddle horses; but should a stronger ball than this be required, add from one to two drachms more of aloes. If, however, the aloes are good, this stronger ball will seldom be required.

## A PURGING BALL FOR A SMALL HORSE.

Take Barbadoes Aloes, .. .. .	4 to 5 drachms
Salt of Tartar, .. .. .	2 "
Rhubarb, .. .. .	2 "
Ginger, .. .. .	1 "
Oil of Cloves, .. .. .	15 drops.
Soft Soap, sufficient for a ball.	



## PURGING BALL FOR A WAGGON HORSE.

Take Barbadoes Aloes, .. .. .	7 to 8 drachms
Ginger, .. .. .	2 "
Salt of Tartar, .. .. .	2 "
Oil of Cloves, .. .. .	20 drops.
Soft Soap, sufficient for a ball.	

This ball should be given in the morning on an empty stomach: in three hours after, give the horse a feed of scalded bran, warm water, and a little good hay; often, also, two more mashes in a day; but if he refuse them, give him some raw bran. Take care the water you give him be lukewarm. Early the next morning give him a mash and warm water; clothe him, and ride him about gently two or three times a day. If the physic operates too much, give him less water and less exercise; if too little, give him more exercise and as much warm water as he will drink: at night, when the physic has done operating, give him a feed of oats and bran and warm water, for two or three days.

Mercurial Physic is administered with great success in lameness of joints, in all kinds of eruptions, foulness of the blood, glandular and other obstructions.

## RECIPE.

Take Calomel, .. .. .	2 drachms.
Licorice Powder, .. .. .	half an ounce.
Make into a ball, with Conserve of Roses.	

Let this ball be given at night, and the following ball in the morning; and repeat as the case may require, bearing in mind the constitution of the horse.

Take Barbadoes Aloes .. .. .	6 drachms.
Ginger, .. .. .	2 "
Salt of Tartar, .. .. .	2 "
Oil of Cloves, .. .. .	20 drops.
Soft Soap, sufficient for a ball.	

If a horse should swell much with physic, he should be walked about gently till some evacuation be obtained. If this should not succeed, recourse must be had to a cooling, purging clyster, such as the following :—

Take Mutton Broth,	..	..	..	..	1 quart
Epsom Salts,	..	..	..	..	4 ounces.
Olive Oil,	..	..	..	..	4 “
Salt of Tartar,	..	..	..	..	2 drachms.

Dissolve the salts and salt of tartar in the broth ; then add the oil. Before a clyster is given, a small hand should be dipped in the same, and passed up the horse's fundament to bring away the hardened dung, which may be the chief cause of the horse's swelling. The clyster should be administered with a pipe ten or twelve inches long, and a bladder attached to the end of it ; the liquid to be forced through the pipe by twisting the bladder with the hands. After the clyster has been introduced, hold a wisp of hay there for ten minutes.

## SECTION IV.

### WINDY COLIC.

THE WINDY COLIC is known by the following symptoms. The horse frequently lies down, and suddenly rises again, strikes his belly with his hind feet, and refuses his food. When this disorder is severe, it throws his body into convulsive motions ; his eyes have an unusual appearance, his limbs are stretched out as though dying ; his ears and feet are occasionally hot and cold ; he falls into a violent perspiration, and then becomes cold ; he strives often to stale, and turns his head frequently to his flank ; he then falls and rolls about, and often turns on his back. This

last symptom generally proceeds from a stoppage in the urinary passage, and the pain is frequently increased by a pressure of dung on the neck of the bladder.

#### INFLAMMATORY GRIPES.

This sort is attended with violent spasms, great heat, fever, and dryness of the mouth. The horse generally throws out bits of dung, offensive in smell; the water is blackish: when this is the case the bowels are almost in a state of mortification, and consequently there is great danger; but that danger may be prevented by administering the proper remedies I have ordered.

#### DRY GRIPES OR COLIC.

This disorder is discovered by the horse's frequent motion in straining to dung; the blackness and hardness of it, the frequent motions of his tail, by often endeavouring to stale—which he can effect only in small quantities—the obstruction being occasioned by a pressure of dung on the neck of the bladder.

#### FOR DRY GRIPES AND WINDY COLIC.—THE BALLS.

Take Gum Asafetida .. ..	1 ounce.
Gum Camphor .. ..	1 “
Nitre .. ..	2 “
Resin .. ..	2 “
Castile or common Soap, .. ..	2 “
Spirit of Turpentine, a sufficient quantity for four balls.	

When persons are living a great distance from town, they should always have these medicines prepared and kept by them. As soon as the complaint is discovered, let one of the above balls be given, and repeated; also give gruel after the ball. Let a small hand be introduced up the fundament (if the case require it) to remove the dung which is pressing on the bladder: let the hand be previously immersed in the following clyster, which is afterwards to be given. The above balls, possessing, as they do, the valuable properties of a diuretic, as well as antispasmodic medicine, should be given to horses occasionally subject to the gripes, to prevent their recurrence.

## THE CLYSTER.

Take Epsom or Glauber Salts..	..	..	4 ounces.
Sweet Oil, ..	..	..	2 "
Salts of Tartar, ..	..	..	3 drachms.
Gruel, ..	..	..	1 quart.
Mix, by dissolving the ingredients in the gruel.			

## INFLAMMATORY GRIPES.—THE MIXTURE:—

Take Tincture of Asafœtida, ..	..	..	2 ounces.
Balsam of Copaiva, ..	..	..	2 "
Spirits of Nitre, ..	..	..	2 "
Rectified Oil of Amber, ..	..	..	1½ "
Tincture of Opium, ..	..	..	1 "
Camphorated Spirits of Wine, ..	..	..	2 "
Spirits of Turpentine, ..	..	..	2 "
Peppermint Water, ..	..	..	20 "

Mix for two drinks, and give one immediately; at the same time give a quart or two of warm gruel, and let a hand be introduced up the fundament, and clear away what dung you can, and give the clyster as ordered for the dry gripes and colic. As the above mixture seldom requires more than forty or fifty minutes to act, sometimes less, which is to be known by the horse's rolling and kicking about violently, also expelling a great deal of wind, neither the hand nor the clyster may be required to be used under such circumstances. I have given a recipe for the other gripes (in balls), but principally as a preventive, though the medicine is well adapted for that description of gripes; but, nevertheless, let me impress on your mind the necessity of giving this mixture as I have here ordered, should the other gripes be of a nature to require it; and introduce the hand and clyster as described. If you lose a horse, valuable or otherwise, it will be your own fault, as I have placed before you the means of obviating bad consequences and of prolonging the life of many a valuable horse that must have otherwise been sacrificed. In some slight cases of gripes I have no doubt that many simple remedies are sometimes administered with success. I will mention one case in particular. Mr. Manning, architect, of London,

who has been a large contractor for building Union Houses under the provision of the New Poor Law Act, (principally in Wales), had a horse severely attacked with inflammatory gripes : at eight o'clock in the morning they gave the following medicines, obtained from the most experienced persons in the town, viz :— black pepper and ale, two bottles of Daffy's elixir, two pints of castor oil and laudanum clysters, &c., and all without effect. At eight o'clock in the evening I returned from the country and relieved that horse from one of the most acute pains which a horse can be subject to, arising from improper treatment. Every person who saw the horse said that it could not possibly live ; the flesh was worn off the body in many parts, owing to the violent action of the horse ; but the operation of the medicine I administered had the effect which I before stated ; and he was actually in a short time afterwards eating hay out of the rack. I could give many other similar proofs of the efficacy of this medicine ; but the one above mentioned will, I have no doubt, be quite sufficient.

## SECTION V.

### COLDS AND COUGHS.

COLDS are often the effect of obstructed perspiration, by immoderate exposure to the weather ; but they generally proceed from the horse's drinking cold water after violent exercise, or from his being ridden in or across rivers or ponds when overheated. Colds are the source of a variety of disorders, such as fevers, coughs, the farcy, glanders, &c. After a horse has taken cold he is seized with a cough, heaviness and dullness, which affect him more or less according to its severity ; weakness and heaviness of the eyes, a discharge from the nose, and pipes or rattles in breathing, are other symptoms. When the cold is severe it is attended with fever and loss of appetite.

## THE POWDERS.

Take Dover's powder	..	..	..	2 ounces
Calomel	..	..	..	$\frac{1}{2}$ "
Nitre	..	..	..	2 "

Mix, and divide in four parts; let one be given twice a-day in warm mashies of scalded bran and oats, and let the horse have plenty of warm water, and very little dry food, but more mashies.

## THE BALLS.

Take Emetic Tartar	..	..	..	1 ounce.
Gum Ammoniacum	..	..	..	2 "
Squills, in powder	..	..	..	3 "
Nitre in ditto	..	..	..	3 "
Castile Soap	..	..	..	2 "
Anise Seed	..	..	..	2 "

Balsam of Sulphur, a sufficient quantity to make eight balls; one of the balls to be given every night and morning. The powders, as ordered above, to be given two days previous to giving these balls; continuing the mashies without the powders.

The above will be found a superior medicine for the cure of colds of every description. If the horse should be of full habit of body, and the cough obstinate, bleeding will be requisite. The horse to be kept clothed, well exercised, and to have warm water.

If the cold or cough should at any time be attended with fever and loss of appetite, give the following drink in a quart of warm ale; and repeat it if required, but omitting to give the balls. The following

## DRINK, CORDIAL, OR COUGH BALLS

## WILL BE SUFFICIENT FOR ALL LIGHT COUGHS.

Take Glauber's Salts	..	..	8 to 12 ounces.
Salt Petre or Nitre	..	..	1 "
Carbonate of Ammonia	..	..	2 drachms.
Genuine Gentian Powder	..	..	$\frac{1}{2}$ ounce.
Mix for a drink.			

## CORDIAL COUGH BALLS.

Take Anise Seed .. .. .	4 ounces.
Carraways .. .. .	4 "
Ginger .. .. .	2 "
Capsicum, powdered .. .. .	2 "
Nitre, in powder .. .. .	4 "
Gum Camphor .. .. .	1 "
Castile or common Soap .. .. .	3 "
Oil of Anise Seed .. .. .	$\frac{1}{2}$ "
Honey sufficient to form a mass, and divide into balls of two ounces each.	

For slight coughs or colds give one ball every night and morning. As a cordial ball for hunters, &c., give one as the horse may require it from his work.

## A DRY COUGH.

This is a convulsive motion of the muscles of the thorax and abdomen: it is generally occasioned by cold, with checked perspiration. If the cough be of long standing, with a wheezing and rattling in the throat and nose, the horse will be liable to become broken-winded, and will require skilful treatment. First give mashies of scalded bran and oats, with a little nitre in each, for two or three days; then give the following:

## BALL.

Take Barbadoes Aloes .. . . .	5 drachms.
Emetic Tartar .. . . .	1 "
Licorice Powder .. . . .	2 "
Honey or Treacle sufficient for a ball.	

Take one ounce of Dover's Powder; half an ounce of Capsicum Powder; mix, divide in two parts, and give one in a quart of warm ale, and repeat the other in twenty hours afterwards. This drink is not to be given until the ball has ceased to operate. The ball and powders should be increased if required; but the cough is generally cured in a few days by the treatment I have here ordered.

## SECTION VI.

## ASTHMA.

ASTHMA is a disease very common among horses at the spring of the year, before they are turned out to grass; and at the latter end, when they are taken up to dry meat. Asthma is attended with quick, short, difficult breathing, and a cough, sometimes dry and sometimes moist, with a quick motion of the flank. If the horse be trotted, he wheezes and rattles in the throat like one that is broken-winded. First give him a Ball composed as follows at night :

Take Calomel	..	..	..	..	2 drachms.
Licorice Powder	..	..	..	..	$\frac{1}{2}$ ounce
Honey or Treacle sufficient for a ball					

The following morning give the Purging Ball as under :

Take Barbadoes Aloes	..	..	..	6 drachms.
Gum Ammoniacum	..	..	2	"
Gum Asafetida	..	..	2	"
Gum Galbanum	..	..	2	"
Oil of Anise Seed	..	..	$\frac{1}{2}$	"
Treacle or honey sufficient for a ball.				

The Calomel ball and purging ball may be repeated three or four times, at proper periods, say from nine days to a fortnight between. During the intervals of purging give two ounces of the following mixture :

Take Honey	..	..	..	8 ounces.
Salt of Tartar	..	..	2	"
Turkey Opium	..	..	2 drachms.	
Gum Camphor	..	..	3	"
Benzoic Acid	..	..	2	"
Oil of Anise Seed	..	..	1	"



Pour three pints of warm water over the preceding, and digest till dissolved; then add Spirit of Wine four ounces, and bottle.

This medicine will be found well calculated for curing this disease. It allays irritation, which provokes coughing; gives more liberty of breathing; allays the uneasy sensation caused by acrimonious humours; cleanses the small glands, and makes way for their discharge; enlarging the capacities of the vessels, which is essential in the cure of an asthma.

## SECTION VII.

### GLANDERS.

THE Glanders are known by matter running from the nostrils, which is yellow or greenish, and occasionally coloured with blood. When the disease is of long standing and the bones become carious, or when the matter is blackish, and becomes very offensive, the disease is incurable. It is always attended with a hard swelling of the glands. This disease begins with a slight inflammation of the pituitary membrane, which lines the partition along the inside of the nose, and the frontal cavities above the orbits of the eyes, and from the head along the back of the tail. There are several diseases falsely called the glanders. They may proceed, as some suppose, from an ulceration of the lungs, which causes a whitish matter to come away in lumps.

The second sort seizes a horse after some long lurking disease brought on by hard labour, which affects the lungs; the humour then appears whitish, tinged with yellow.

The third sort is a discharge from the strangles, which frequently vents itself at the nostrils. [See Strangles.]

The fourth sort is when an acrimonious humour in the farcy seizes these parts, where an incurable foundation is laid.

As there are several sorts of this disease discernible by the eye, it will be proper to inform the reader that the three first mentioned (or falsely the glanders) are curable.

Take Flower of Sulphur	..	..	..	$\frac{1}{2}$ pound.
Crude Antimony	..	..	..	$\frac{1}{2}$ "
Crocus Metallorum	..	..	..	$\frac{1}{2}$ "
Tartarized Antimony	..	..	..	1 ounce.
Barbadoes Aloes	..	..	..	4 "

Gum Camphor, four ounces, dissolved in Spirits of Wine.

Let this be made into balls of one ounce each, with honey, and one ball be given every night and morning before exercise, which may be continued for a month or six weeks; or longer if requisite; and during the month or six weeks, let the horse have a mild dose or two of physic, with the treatment required in the purging directions.

#### THE BALL.

Take Barbadoes Aloes	..	5 or 6 drachms,	} according to the size of the horse.
Calomel	..	1	
Ginger	..	2	"

Soft Soap, sufficient for a ball.

I have found Iodine, properly administered, a valuable medicine, where the disease has not been considered incurable: which prepare as follows :—

Take Iodine	..	..	..	1 drachm.
Gum Camphor	..	..	..	2 "
Licorice Powder	..	..	..	2 ounces.

Honey, sufficient for five balls.

One of these balls to be given to the horse for a week, at night; then give one every night and morning.

Should the Iodine affect the horse with the following symptoms, namely, loss of appetite, great desire for water, yellowness of the eyes, &c., give him the ball as under; but should

the disease not give way to the quantity of Iodine I have ordered, it may be increased gradually. It will be requisite to give the following purging ball every nine days, and pay the same attention as ordered elsewhere for purging horses; and of course not giving the Iodine Ball for the time.

#### THE BALL.

Take Barbadoes Aloes .. ..	5 or 6 drachms.
Gum Myrrh .. ..	2 "
Venice Turpentine .. ..	2 "
Ginger .. ..	1 "
Soft Soap, sufficient for a ball.	

A little of the solution to be thrown up the horse's nostrils occasionally, with a syringe or pipe, eight or ten inches long.

Take Oxymuriate of Mercury .. ..	2 scruples.	} dissolve.
Muriatic Acid .. ..	2 drachms	
Add Tincture of Euphorbium .. ..	2 "	
Water .. ..	1 pint.	
Mix, for the injection.		

If the horse be fat, bleeding and rowelling will be serviceable; but if poor, the contrary. Let the horse have blistering liquid and be well rubbed, every other morning for a week, on those small kernels found under the jaws. This will greatly relieve the inflammatory tumour which is formed in the glands. The horse to have plenty of warm mashes. This disease is incurable when the matter discharged from the nostrils turns greenish, or is tinged with blood, and sticks like glue. If the horse be poor he sometimes is afflicted with the Farcy also. It may not make its appearance to the eye for some time; but when it threatens, it is soon known, by the sharpness of the corrosive matter that runs down the nostrils, and destroys that gristly part, and separates one cavity of the nose from the other.

## SECTION VIII.

## FARCY.

THE FARCY is a sharp corrosive tumour in the blood, attended with inflammation ; it resembles round buds or berries, and makes its appearance over the veins, which are first hard, but soon turn to soft blisters, and when broken discharge an oily bloody matter, and often turn into obstinate ulcers. In some horses it shows itself in the head only ; in others on the jugular or neck vein ; in others on the plate vein, and runs down the inside of the fore leg, called the fore arm, towards the knee, and often upwards towards the brisket ; in others it shows itself on the hind parts, about the pasterns, and along the large veins inside the thigh, rising upwards into the groin, and towards the sheath ; sometimes it appears in the flanks, and spreads by degrees to the belly. When the Farcy appears on the forehead, the cheeks, the outside of the shoulders near the withers, or the hip, it is easily cured. The worst symptoms are when the veins in the thigh are corded and set with substances, or buds, so as to affect the kernels of the groin, and the cavernous body of the yard. When it breaks out on one side of the thigh and afterwards on the other, or on both sides at once, so that the sores become malignant and affect the whole body, without due attention to a regular course of medicine, feeding, and exercise, this disorder will increase, and become incurable glanders.

Take Gum Camphor	..	..	4 ounces.	} dissolve in 2 ounces of Spirits of Wine.
Calomel	..	..	2 "	
Emetic Tartar	..	..	1 "	
Crude Antimony	..	..	8 "	
Flower of Sulphur	..	..	4 "	
Barbadoes Aloes	..	..	2 "	
Nitre	..	..	4 "	

Balsam of Sulphur, sufficient to form a mass, and divide into equal balls of two ounces each. One of these balls to be given to the horse every night, for a fortnight or three weeks if required, or longer; the horse to fast for two hours after having the ball; plenty of warm mash and warm water to be given. Let the horse have one physic ball in a fortnight, or less, not giving the other balls for the time he is under physic.

#### PHYSIC BALL.

Take Barbadoes Aloes	..	..	..	6 drachms.
Salts of Tartar	..	..	..	$\frac{1}{2}$ ounce.
Ginger	..	..	..	2 drachms.
Soft Soap a small quantity, and mix for the ball.				

But in the most obstinate Farcy, where the veins are obstructed, and attended with large inflammatory tumours, recourse must be had to some very powerful medicine.

Take Oxymercuriate of Mercury	..	..	10 grains.	} dissolve.
Spirits of Wine	..	..	2 ounces.	

Let this be given in a pint of fresh beer, not warm. This may be given every day for a week, or every other day for a fortnight, or longer; but if his mouth grows sore and offensive, omit it for a week; then repeat it as before. Keep him warm and in regular diet, with gentle exercise twice a-day if the weather is fine. Give him warm water and mash morning and evening.

During the course of this medicine, it will be found very powerful in purifying and opening obstructions in the blood vessels, and dissolving the buds that appear along the veins. When under a course of mercurials it is necessary to give a dose of cooling physic once a week, such as follows:—

Take Barbadoes Aloes	..	..	..	7 drachms.
Cream of Tartar	..	..	..	1 ounce.
Nitre	..	..	..	1 “
Ginger	..	..	..	3 drachms.
Dissolve in one quart of warm water.				

This drink must be given in the morning fasting, and the horse must eat nothing for two hours after ; then let him have a mash of bran, oats, and warm water, twice a-day. If the horse be fat and full of blood, bleeding and rowelling under the belly will be necessary in the beginning of this disorder ; but if poor, the loss of much blood will prove injurious. Rub the Farcy-buds once a-day with strong mercurial ointment, before and after they are broken ; it will dissolve the tumours which obstruct the blood-vessels. When the skin is so thickened over the ulcers as to confine the matter, it must be opened with a lancet. If the obstructions or buds should turn to foul ulcers, and the orifices fill with bad flesh, it must be suppressed either by caustic, or with a skewer dipped in butter of antimony or aquafortis. If the parts be much inflamed or swollen, they must be well fomented with hot water, for half an hour or more each time. This being done, let the part be rubbed with mercurial ointment, and a hot flannel applied to the swollen part, and bound on with a flannel roller, several yards long, and six to eight inches broad. When the tumour comes to a proper head, which may be easily felt by the finger, it may be discharged with a lancet, and dressed with a skewer dipped in a little butter of antimony, and afterwards with a tent made of hurds, dipped in the digestive ointment or oils used for green wounds. It should not be dressed after the tumour has subsided. When the wound is perfectly cleansed, let it be dressed with a little Fryar's Balsam ; afterwards let bole ammoniac and burnt alum, of equal parts, be mixed together and strewed over it, which will soon dry and heal it up.

## SECTION IX.

### SURFEIT AND HIDE-BOUND.

SURFEITS arise from various causes ; in some instances they are the effects of some disease not properly cured ; at other times they are caused by a bad cold, checked perspiration, and too great

a loss of blood. When a horse is surfeited his coat stares and looks ragged. Notwithstanding proper care has been taken to keep him clean, the skin will be found full of scales and scurf, and after being cleaned it will re-appear, lying thick like meal among the hair. Other horses have small lumps, like peas or beans, while they are in the stable, which often disappear when they are turned out to grass. Some have scales over all parts of the body, sometimes moist, at other times dry, attended with inflammation ; and so sharp and irritating that they rub themselves raw in many places. Others have pains and lameness resembling rheumatism or flying gout. In curing these complaints the following method will be found successful.

Take Diaphoretic Antimony	..	..	2 ounces.
Nitre	..	..	1 "
Sulphur	..	..	1 "
Gum Camphor	..	..	3 drachms.
Ginger	..	..	1 ounce.

Mix, for a drink. Let it be given in a quart of warm ale, and repeated in two or three days afterwards ; then give the following powders :

Take Crocus of Antimony	..	..	8 ounces.
Nitre	..	..	4 "
Flower of Sulphur	..	..	4 "
Antimonial Powder	..	..	1 "

Mix, and give one ounce of it every evening in a warm mash of scalded bran and oats. While the horse is under this course of medicine he must have mash of scalded bran and oats twice a-day, and warm water. The medicine to be continued for two or three weeks if required. If the scabs should not come off in the course of a week after using the powders, let them be rubbed with mercurial ointment, or with a mixture containing equal parts of turpentine and train oil.

A wet surfeit is no more than a moist running scurvy, which

appears on various parts of the body, with great heat and inflammation; the neck often swells, and issues a large quantity of saltish humour, which, without care, may turn to the Poll Evil. This humour sometimes falls on the lower limbs, and is often very troublesome to cure: in this case bleed plentifully, and administer the following cooling physic once a week.

Take Barbadoes Aloes	..	..	..	6 drachms.
Nitre	..	..	..	1 ounce.
Salt of Tartar	..	..	..	$\frac{1}{2}$ "
Ginger	..	..	..	2 drachms.

Mix; to be given in a pint of warm ale in the morning fasting; and then give a warm mash and warm water.

## SECTION X.

### MANGE.

THIS dreadful scourge to horses is a cutaneous disease, which renders the skin thick, tawny, and full of wrinkles, and especially near the mane, ears, tail and loins. The hair in these parts generally rubs off, and the little which remains, in some instances, stands out like bristles. Some horses are so affected with this disease, that there is scarcely a clean place about the body. Many horses have been troubled with it for months, and even a year, or more. Many preparations have been applied without success, others have given only temporary relief until the animal has become in so low and mangled a state as to render a cure almost hopeless; but the following will be found, if properly used, a decided remedy, seldom requiring a second dressing, unless in desperate cases. Let the diseased parts be well cleaned with a wash, composed of soft soap, four ounces, potash two ounces, lime-water or urine three pints. The horse to be well scoured all over with this first, with a round brush, such as is used for oiling shoes; then



Take Tobacco .. ..	2 ounces.	} infuse for four hours.
Boiling Water .. ..	2 quarts.	
Strain, } Genuine Hellebore Root }	4 ounces.	}
and add } Powdered .. ..	4 " "	
Flower of Sulphur ..	4 " "	} dissolve in two ounces.
Oxymuriate of Mercury	½ " "	
Then add Spirit of Turpentine ..	6 " "	} of Muriatic Acid.

Let the whole be well mixed and shaken together before using. Then dress the affected parts with it with an oil brush, in the same manner as in using the wash. Horses that have this disease must be kept by themselves, and the place where they stood well cleaned; and whatever they wore during the disease must be thoroughly washed with soap and water.

## SECTION XI.

### STAGGERS, CONVULSIONS, LETHARGY, EPILEPSY, AND VERTIGO.

ALL distempers of the head are generally included under two denominations, namely, Staggers and Convulsions. The symptoms are as follow:—The Staggers or Apoplexy is attended with drowsiness, the eyes are full and inflamed, and sometimes watery, the head is continually hanging down, and the animal sometimes reels and staggers about like a person intoxicated.

The Lethargy, commonly called the Sleeping Evil, is a disorder in the head. The horse frequently falls asleep with his head resting on the manger, and often shows an inclination to eat, but falls asleep with the food in his mouth. This disease is also called the Sleeping Staggers.

Epilepsy and Convulsions generally arise from blows on the head, violent exercise, surfeits, strains, and sympathy of the nerves. Violent pain in any part of the body will cause convul-

sions, especially if the nerves and tendinous parts be affected with wounds, or botts and worms wounding the coats of the stomach, which is sometimes distended with a load of indigested food ; this is generally attended with costiveness.

This disease has various terms, but is commonly called the Staggers and Convulsions. When the horse is raging it is called the Mad Staggers. If care be not taken, he will knock and bruise his head in such a manner as to endanger his life ; to guard against which, every care should be taken to prevent his striking his head against the wall ; for a horse in this state pushes forward with all his strength, till exhausted ; and then falls as though shot.

In these cases, if the most powerful remedies be not administered immediately the case will prove fatal. If the horse be in high condition, bleed plentifully ; if not, sparingly ; then administer the following clyster :

#### THE CLYSTER.

Take Barbadoes Aloes	.. .. .	5 drachms.
Pulvis Colocynth	.. .. .	2 "
Salt of Tartar	.. .. .	$\frac{1}{2}$ ounce.
Dissolve it in two quarts of boiling water ; then add half a pint of sweet oil.		

This Clyster should be repeated night and morning, so that the horse may be kept in a constant state of purging for twenty-four hours ; by this method the vessels will be much sooner emptied than by purges administered at the mouth. Should the symptoms arise from violent exercise, so as to cause fever and rarefaction of the blood, give the following drink :

Take Tincture of Valerian	.. .. .	2 ounces.
Emetic Tartar	.. .. .	$\frac{1}{2}$ drachm.
Nitre Powdered	.. .. .	4 ounces.
Dissolve in two quarts of water, and give it immediately.		

This may be repeated every six hours for two or three days, in order to attenuate the viscid blood and juices, and to promote a free circulation of the vessels through the brain ; but if, notwith-

standing the above plentiful evacuations by repeated bleeding, clysters, &c., the horse should beat about with great violence, and be attacked with strong convulsions, two drachms of opium should be dissolved in the above drink, which may be repeated every six hours until the convulsions abate, when the opium may be omitted and the drink continued ; but should the spasms not remit, a drachm or more of opium must be added to the drink. When this disorder is attended with great fever and there is a tendency to inflammation of the brain, which may be discovered by the usual symptoms of a hot mouth, dry tongue, hot ears and skin, and a due attention to the pulse, nitre alone should be given, to the quantity of half a pound or more, in twelve hours ; accompanied with large bleedings, and cooling emollient clysters.

#### FOR THE CLYSTERS.

Take Tincture of Valerian .. .. .	2 ounces.
Gum Asafoetida .. .. .	2 "
Gum Opium .. .. .	$\frac{1}{2}$ "
Nitre .. .. .	4 "
Dissolve the gums and nitre in two quarts of boiling water, then add the Tincture of Valerian.	

When medicine cannot be taken by the mouth, this clyster must be given, and repeated occasionally ; for the spasms on the membranes and muscles are sometimes so great as totally to lock the jaw. Under such circumstances, the opium must be chiefly depended upon ; and the horse's food must be taken in this way, consisting of clysters of milk, broths, &c., to the quantity of three or four quarts a-day, and the following liniment applied.

Take Spirit of Turpentine .. .. .	2 ounces.
—— Sal-ammoniac .. .. .	4 "
Soap Liniment .. .. .	2 "
Tincture of Opium .. .. .	1 "

Mix them together ; after well brushing the muscles of the jaws, neck, temples, and cheeks, rub the parts well with the liniment twice a-day.

## SECTION XII.

## FEVERS.

FEVERS in general are the effect of a strong unnatural motion of the blood, occasioning great heat and inflammation of the body; the pulse is quickened beyond its natural speed. The general symptoms are loss of appetite, and restlessness, the horse moving from one end of the rack to the other, his eyes red and inflamed, his tongue parched and dry, his flanks beat quick, his breath hot and offensive. He bites at the hay, and frequently hangs his head down to the ground; his pulse beats upwards of fifty times in a minute; his body appears much warmer than usual, though not so dry as in some inflammatory disorders.

Internal inflammatory fevers generally take their seat at the stomach, from a cold, or from a large distention of the stomach by a load of indigested food, causing inflammation to extend to various parts of the body, which obstructs perspiration, and if not speedily removed may prove fatal.

The symptoms of a violent inflammatory fever are similar to those of the staggers, and require almost the same treatment. The horse appears at times quite senseless and stupid; stales and dungs insensibly; ranges about the stable, and is subject to bruise himself against the walls; his flanks beat, his ears and legs are hot and cold alternately; his body is often in great heat, and sometimes emits cold sweats. In these cases bleed frequently, not more than two quarts each time; then give the following drink.

## THE DRINK.

Take Epsom or Glauber's Salts .. ..	8 ounces to a pound.
Nitre .. .. .	2 "
Ginger .. .. .	$\frac{1}{2}$ "

Mix; to be given in a quart of ale or gruel. If the fever increases after this drink, recourse must be had to the powders for inflammatory fevers.

Take Emetic Tartar	..	..	..	1 ounce.
Calomel	..	..	..	$\frac{1}{2}$ "
Calcined Antimony	..	..	..	2 "

Mix, and grind them together to a fine powder in a mortar. Two drachms of these powders to one dose, mixed in honey or conserve. A dose of this mixture may be given twice or three times in twenty-four hours, if the fever be violent and the horse restless. The powders are good for every kind of inflammatory fever.

When the disease has subsided the horse will recover himself; his eyes will become more lively, his appearance more brisk, and he will eat his meat. Then the medicine may be omitted, and the following strengthening drink administered, which will give tone to the stomach.

Take Powdered Gentian	..	..	..	1 ounce.
Sulphate of Iron	..	..	..	2 drachms.
Salt of Tartar	..	..	..	$\frac{1}{2}$ ounce.
Ginger	..	..	..	$\frac{1}{2}$ "
Mix in a quart of warm ale.				

### SECTION XIII.

#### BRUISES.

A HORSE that is much bruised with falls or blows should first be bled, then treated as follows:

Take Spirit of Turpentine	..	..	..	4 ounces.
Spirit of Sal-ammoniac	..	..	..	6 "
Soap Liniment	..	..	..	4 "
Camphorated Spirit of Wine	..	..	..	4 "
Pale Oil	..	..	..	8 "

Mix well together, and rub the bruised parts with it once or twice a-day. Let the part be well fomented before using the mixture. If the horse should appear stiff, dull, and sore, and his appetite fail, give him the following drink:

Take Gentian Powdered	..	..	..	1 ounce.
Sulphate of Iron	..	..	..	2 drachms.
Nitre	..	..	..	1 ounce.
Ginger	..	..	..	$\frac{1}{2}$ "

Mix, and give it in a pint of warm ale. This drink may be repeated every morning if required. Give warm mashes and warm water twice a-day.

## SECTION XIV.

### OF THE STRANGLES AND VIVES.

THE STRANGLES is a disease to which most young horses are subject at one time or other. It generally begins with a swelling between the jaw bones, which extends to the muscle of the tongue, and causes great pain, heat, and difficulty of swallowing a feverish heat throughout the body, a painful cough, great thirst, attended with extreme difficulty to drink. Some horses lose their appetite; others eat sparingly. The inflammation generally appears on the inside of the jaw bone, but sometimes in the middle, between the jaws under the tongue roots, and the upper part of the throat, called the larynx, or head of the windpipe or gullet. When this last part is affected he breathes quickly, and constantly holds out his head in the same position; his eyes appear to be fixed, and he seems to have no power of moving them. This disorder discharges itself at the nose on some occasions, and is troublesome to cure: it is then called the Bastard Strangles.

## THE REMEDY.

Assist nature by giving warm water and hot mashes, with one ounce of nitre twice a-day, which will allay the feverish heat internally. The swelling under the jaws to be well rubbed with the following ointment twice a-day, and afterwards a poultice to be applied over the swollen part, and his head and neck to be covered with a warm flannel.

## THE OINTMENT.

Take Elder Ointment	..	..	..	2 ounces.
Marsh Mallows Ointment	..	..	..	2 "
Gum Camphor	..	..	..	2 drachms.
Goulard's Extract	..	..	..	$\frac{1}{2}$ ounce.
Rape Oil	..	..	..	1 "

Mix; the poultice may be made of turnips, oat-meal, rye-flour, or linseed powder, adding a little hog's lard to prevent its getting dry. The matter is generally formed in four or five days. If it should not discharge, it may be opened with a lancet or knife, and dressed with digestive ointment.

But the easiest and best treatment which I recommend and adopt is that of giving the mashes and nitre as I have ordered, and applying the following liquid blister every other morning. Let the hair first be cut off.

Take Fresh Powdered Lyttæ	..	..	..	3 drachms.
Gum Euphorbium	..	..	..	5 "
Gradually rubbed to a paste with a little Turpentine;				
Then add, Sublimate	..	..	..	1 "
The Lyttæ	..	..	..	..
Oil of Organum	..	..	..	2 "
Spirit of Turpentine	..	..	..	2 ounces.
Rape Oil	..	..	..	5 "
And mix well together for use; one sixth part to be rubbed in as ordered.				

## SECTION XV.

## DISEASES OF THE EYES.

DISEASES of the eyes require great attention. Some of these proceed from external injuries affecting the globe of the eye; others from internal accidents. In all recent disorders from external injuries, such as blows, bruises, hurts, &c., when the eyelid is swollen and inflamed it must first be washed or fomented well with hot water, and a little vinegar added to it. Then use the following eye-water:

Take Purified Sulphate of Zinc	..	..	$\frac{1}{2}$ drachm.
Sub-acetate of Lead	..	..	$\frac{1}{2}$ "
Camphorated Spirit of Wine	..	..	2 drachms.
Tincture of Opium	..	..	2 "
Water	..	..	1 pint.

Mix: let the eyes be well bathed with a linen rag, dipped in the eye-water two or three times a-day, previously bathed with hot water. If the inflammatory symptoms continue for three or four days, bleeding and purging must be had recourse to. A horse in every stage of this disorder must have warm water and mashes.

Those diseases of the eye to which horses are subject, that have been driven very hard on the road, are great inflammation, the discharge thick, a skin or cataract forming over the eyes. At other times they proceed from some chronic complaint; and if proper remedies be not applied the horse will probably lose the sight of one eye, if not both. These symptoms are called moon eyes. The horse must first be bled; after which let his eyes be well cleaned with warm water; then apply the following lotion three or four times in the day. If the symptoms are violent the horse's body should be kept open with warm water, mashes, and



the Physic Ball, and rowelled at proper times. With the following lotion I have performed cures of the eye when in a serious state :

#### THE LOTION.

Take Purified Sulphate of Zinc	..	..	$\frac{1}{2}$ drachm.
Sub-acetate of Lead	..	..	$\frac{1}{2}$ "
Burnt Alum	..	..	$\frac{1}{2}$ "
Calomel	..	..	$\frac{1}{2}$ "
Tincture of Iodine	..	..	50 drops.
Spring Water	..	..	1 pint.
Tincture of Opium	..	..	2 drachms.
Mix.			

#### THE BALL.

Take Barbadoes Aloes	..	..	4 drachms.
Colocynth, in Powder	..	..	2 "
Calomel	..	..	2 "
Ginger	..	..	2 "

Soft Soap sufficient for a ball.

This ball may be given once a-week if necessary. The haws are horny substances which appear in the corner of the eyes : the operation of removing them is performed in the following manner :—The horse's head must be confined and his nose twitched ; then take half-a-crown piece, or something similar, and pass the edge of it between the eye and the haw ; then draw a crooked needle, threaded with silk, through the haw against the half-crown, or what you may hold. By this method the eye will be preserved from danger ; and by drawing a little towards you it pulls the haw from the eye ; then, with a good pair of scissors, clip it off close to the eye, and dress it with a little Fryar's Balsam. Should any spongy flesh arise, a little burnt alum sprinkled on it will soon remove it.

## SECTION XVI.

## PLEURISY AND INFLAMMATION OF THE LUNGS.

WHETHER the inflammation takes its origin from the pleura or the external coat of the lungs, is a matter of little concern, as the disorders are similar. It appears most probable that the inflammation originates in the pleura, and spreads from thence to the lungs. The causes are cold, producing a sudden and great distention of the pleura in respiration, and the horse's drinking cold water when he is hot, or standing long in the cold. The symptoms of inflammation and pleurisy of the lungs are nearly the same; there is however a slight difference. In Pleurisy the horse appears greatly agitated, heaves and works violently with his flanks, the abdomen appears contracted; the fever, which at first is slight, afterwards becomes serious. In the beginning of this disease he strives to lie down, starts up again immediately, and frequently turns his head to the affected side; his ears and feet are hot, his mouth dry, and he is continually troubled with a painful cough attended with spasms; and when the disease is more advanced there is generally to be found in the horse's mouth a thick ropy slime, attended with a similar discharge of the nostrils. In the first stage of the disease, if the horse be powerful and strong, take three quarts of blood from him; if poor or lean of flesh, half the quantity may be sufficient; then give the following balls.

## THE BALLS.

Take Emetic Tartar	..	..	..	1 ounce.
Digitalis	..	..	..	1 "
Gum Camphor	..	..	..	2 "
Nitre, in powder	..	..	..	4 "
Soap	..	..	..	4 "

Mix with honey, and divide into twelve balls, and let one be given every six or eight hours until the disease has taken a favourable turn; one, once or twice a-day, will then be sufficient. If the symptoms of the disease do not abate in a few hours, recourse must be had to the following clyster.

#### THE CLYSTER.

Take Nitre .. .. .	1 ounce.
Glauber's Salts .. .. .	4 "
Salt of Tartar .. .. .	2 drachms.
Treacle .. .. .	4 ounces.
Sweet Oil .. .. .	$\frac{1}{2}$ pint.
Boiling Water .. .. .	3 "

Mix. Before the clyster is applied a small hand should be passed up the fundament to bring away the dung. Repeat the clyster once a-day until the symptoms abate, and after this give your horse one of the following powders, morning and evening, in his mash for a fortnight; and give him plenty of warm water and exercise.

#### THE POWDERS.

Take Crocus of Antimony, finely levigated	4 ounces.
Nitre, in powder .. .. .	8 "
Mix, and divide in twelve papers.	

### SECTION XVII.

#### BROKEN WIND.

The symptoms are a hollow cough, which is increased with work or exercise, and attended with wheezing, and great working and extension of the flanks.

The causes are a preternatural enlargement of the lungs, by obstructions in the minute vessels thereof, which may have had their origin either in defluion or inflammation. In the com-

mencement of this disease treat it as ordered for the Asthma. When this disease is confirmed, medicine can only mitigate and palliate the symptoms.

## SECTION XVIII.

### THE YELLOWS OR JAUNDICE.

THE signs of the Jaundice are a yellowness in the eyes, and all the internal parts of the mouth; the horse appears heavy and dull, and has but little inclination for food. His urine is of a saffron colour, and when exposed to the air it sometimes looks red. The dung is hard and of a pale yellow. The fever at first is slow, and if not checked in time the yellowness and fever will increase, and cause inflammation of the liver, and the horse will become distracted. He will stale with pain and difficulty; the off-side of his belly will feel hard, and distended from the swelling of the liver. This disease, if of long standing, and in old horses, becomes very troublesome to cure; but if recent, and in young horses, the cure may soon be performed by attending to the following directions. First (if no circumstance indicates to the contrary) let the horse be plentifully bled, then give the following clyster and the day after the following balls:

#### THE CLYSTER.

Take Linseed, five ounces; boil it in three quarts of water until reduced to two; let it stand a few minutes, then pour off the clear, and dissolve therein four ounces of Epsom Salts, half a pound of Treacle, and one handful of common Salt.

Before any clyster is administered, a small hand, well rubbed with the clyster, should be passed up the horse's fundament in order to bring away the hardened dung, which would otherwise obstruct the clyster's passage.

## THE BALL.

Take Barbadoes Aloes	..	..	..	6 drachms.
Calomel	..	..	..	2 "
Emetic Tartar	..	..	..	2 scruples.
Oil of Cloves	..	..	..	20 drops.
Soft Soap sufficient for a ball.				

This Purging Ball must be given in the morning fasting, and the horse treated in the same manner as in other purges. It may be repeated two or three times every fortnight. In the intermediate time between each purging ball, give the horse the following drink two or three times a-week.

## THE DRINK.

Take Emetic Tartar	..	..	..	1 drachm.
Nitre, in powder	..	..	..	1 ounce.
Turmeric	..	..	..	2 "
Salt of Tartar	..	..	..	1 "
Epsom Salts	..	..	..	2 "
Soap	..	..	..	1 "

Dissolve the mixture in a quart of warm ale, and give it to the horse lukewarm; and in every stage of the Yellows or Jaundice this treatment will be found successful. This distemper generally abates in the course of a week, which may be discovered by an alteration of the horse's eyes and mouth; but the medicine must not be omitted until the disease totally disappears.

## SECTION XIX.

## OF ALTERATIVE MEDICINES.

ALTERATIVE MEDICINES are those remedies which are given with a view to re-establish the healthy functions of the animal economy, without producing any sensible evacuation. They will therefore be found well adapted to humours and distempers, restoring to the constitution a healthy and pristine appearance.

## ALTERATIVE CONDITION BALLS.

## No. 1.

Take Cinnabar of Antimony	..	..	2 ounces.
Sulphur	..	..	2 "
Gum Camphor	..	..	1 "
Barbadoes Aloes	..	..	1 "
Nitre	..	..	4 "
Castile Soap	..	..	4 "

Honey or Treacle sufficient for making the whole into ten balls;  
one of which may be given every night.

## No. 2.

Take Crocus of Antimony, finely powdered..	4 ounces.
Tartarized Antimony	.. .. 1 "
Flower of Sulphur	.. .. 3 "
Barbadoes Aloes	.. .. 2 "
Nitre, in powder	.. .. 4 "
Castile Soap	.. .. 4 "

Balsam of Sulphur, sufficient to form the whole into a mass for  
twelve balls; one of which may be given every other night, or as  
may be thought proper.

## No. 3.

Take Ethiop's Mineral	..	..	..	3 ounces.
Gum Camphor	..	..	..	1 "
Nitre	..	..	..	2 "
Castile Soap	..	..	..	1 "

Balsam of Sulphur, sufficient to form a mass for four balls; one  
of which may be given every night, and will be found very  
serviceable in all obstinate cases of eruptive diseases of the skin.

## No. 4.

Take Cinnabar of Antimony .. ..	4 ounces.
Calomel .. ..	2 "
Tartarized Antimony .. ..	2 "
Gum Camphor .. ..	4 "
Flower of Sulphur .. ..	4 "
Garlic .. ..	4 "
Nitre, in powder .. ..	8 "
Castile or Common Soap .. ..	4 "
Venice Turpentine .. ..	2 "

Balsam of Sulphur sufficient to form the whole into twenty balls.

This is decidedly one of the best Alterative Condition Balls that are made, possessing as they do the valuable properties of alterative, diuretic, febrifuge, &c., acting so as to remove all kinds of eruptions and impurities of the system, and will be found highly serviceable to prepare horses for sale. These balls may be given with the greatest safety, and will not injure horses even should they not require them. During the time of their being administered the horse will keep in good condition.

## ALTERATIVE CONDITION POWDERS.

## No. 1.

Take Crude Antimony, finely levigated ..	4 ounces.
Flower of Sulphur .. ..	4 "
Nitre, in powder .. ..	8 "

Mix, and divide into sixteen parts. One powder to be given every night and morning in a mash.

## No. 2.

Take Æthiop's Mineral .. ..	4 ounces.
Nitre, in powder .. ..	4 "
Gentian powder .. ..	2 "
Anise Seed powder .. ..	2 "

Mix, and divide into twelve parts; give one every night and morning in a mash.

## No. 3.

Take Crude Antimony, finely levigated	..	4 ounces.
Emetic Tartar	.. .. .	1 "
Flower of Sulphur	.. .. .	8 "
Nitre, in powder	.. .. .	4 "

Mix, and divide into sixteen parts ; one to be given every alternate night and morning, or as may be thought proper.

Having given several recipes for Alterative Medicine, both in powders and balls, I shall make a few remarks.

Horses, while taking alterative medicines, should have warm mashes of bran and oats; and as alterative medicine acts so as to open the pores of the skin, it will be necessary to keep them warm, and let their water be lukewarm. If horses are wanted for sale, it will be requisite, as before stated, to give the medicine as I have ordered it to be given ; but if only required as a slow alterative, it must be given as the practitioner thinks proper.

## SECTION XX.

## CORDIAL MEDICINE

FOR CARRIAGE HORSES, HUNTERS, &c.

## CORDIAL BALLS, NO. 1.

Take Anise Seed	.. .. .	4 ounces.
Carraway Seed	.. .. .	4 "
Cummin Seed	.. .. .	4 "
Ginger, powdered	.. .. .	2 "
Capaicum, powdered	.. .. .	1 "
Gum Myrrh	.. .. .	2 "

Let the above be fresh powdered and mixed together ; then add Essential Oil of Anise Seed half an ounce, Fryar's Balsam two ounces, Honey and Barbadoes Tar sufficient to form a mass, and divide into balls of two ounces each. This will be found an in-



valuable medicine for horses coming home after a hard day's hunting, or for carriage horses hard driven. This medicine will warm, stimulate, and raise the spirits of the horse; it is, in fact, the best cordial restorative medicine that a horse can have after a hard day's work. The ball can be dissolved and given in a pint or quart of warm ale if preferred.

**CORDIAL BALLS, NO. 2.—FOR GENERAL USE.**

Take Coriander Seed	..	..	..	4 ounces.
Anise Seed	..	..	..	4 "
Cummin Seed	..	..	..	4 "
Ginger	..	..	..	4 "
Castile Soap	..	..	..	2 "

Treacle or Honey sufficient to form a mass, and divide into balls of two ounces each.

**CORDIAL STOMACHIC POWDERS.**

Take Anise Seed	..	..	..	4 ounces.
Carraway Seed	..	..	..	4 "
Cummin Seed	..	..	..	4 "
Coriander Seed	..	..	..	4 "
Gentian Powder	..	..	..	2 "
Sulphate of Iron	..	..	..	1 "
Capsicum Powder	..	..	..	1 "

Mix, and divide in four parts. Let one be given in a quart of warm ale. As a cordial stomachic this is a very useful medicine; it warms, stimulates, and raises the spirits, increases the tone of the muscular fibre, and may be repeated every six or eight hours if required.

**CORDIAL DIURETIC BALLS.**

Take Nitre	..	..	..	..	4 ounces.
Resin	..	..	..	..	4 "
Soap	..	..	..	..	3 "
Juniper Berries	..	..	..	..	2 "
Capsicum Powder	..	..	..	..	1 "
Cordial Powders	..	..	..	..	4 "
Spirit of Turpentine and Treacle—					

a sufficient quantity to form a mass, and divide into balls of two ounces each.

As a Cordial Diuretic, it is frequently given to horses that are continually travelling on the road, allaying sweat, promoting the discharge of urine, and giving a tone to the stomach.

#### DIURETIC BALLS.

##### No. 1.

Take Resin powdered	..	..	..	12 ounces.
Salt Petre	..	..	..	12 "
Juniper Berries	..	..	..	8 "
Soap	..	..	..	8 "
Oil of Juniper	..	..	..	1 "

Spirit of Turpentine sufficient to form a mass, and divide into balls of two ounces each.

#### DIURETIC BALLS.

##### No. 2.

Take Resin powdered	..	..	..	6 ounces.
Nitre powdered	..	..	..	6 "
Juniper Berries	..	..	..	4 "
Gum Camphor	..	..	..	2 "
Soap	..	..	..	4 "
Oil of Juniper	..	..	..	1 "

Spirit of Turpentine sufficient to form a mass, and divide into balls of two ounces each.

## SECTION XXI.

#### THE MOLTEN GREASE.

By this disease the fat of the horse is dissolved by the heat of its body; a large quantity of it falls into the intestines, occasioning an oily discharge with the dung. The disease is caused by violent exercise, and drinking cold water too soon after, in hot weather.

The symptoms are a fever, nausea, trembling, restlessness, shortness of breath, and sometimes the pleurisy. In this disorder the dung is commonly very greasy, and accompanied with scouring. The horse's blood, when cold, has a thick fat skin over it, of a yellowish buff appearance; the coagulated part appears to be like a mixture of size and grease, which causes it to be very slippery. The horse soon loses his flesh, and in case he survives his hide is very tenacious for a long time afterwards; his legs swell, and will continue in that state until attenuant medicines are administered, and if not effectually, the Farcy, Glanders, or some other dangerous disease, of a very obstinate tendency, generally follows. To remedy the above complaint the horse must first be bled, to the quantity of a quart; then clothe him well, to raise the heat of his blood, and in half an hour afterwards give the Calomel Ball.

Take Calomel	..	..	..	..	2 drachms.
Ginger	..	..	..	..	2 "

Make into a ball with Conserve of Roses and Licorice Powder.

In four or five hours afterwards give the following drink :

Take Epsom or Glauber's Salts	..	..	6 ounces.
Salt Petre	..	..	1 "
Senna Leaves	..	..	1 "

Infuse in a pint of hot water for an hour or more; strain, and then add the other ingredients, and give it lukewarm.

This will cleanse the stomach and bowels of that slimy and greasy matter and coagulated blood, which is so apt to form in lumps and occasion a total stagnation of the fluids. If the fever should continue after the above medicine is given, recourse must be had to the fever mixture.

Take Emetic Tartar	..	..	..	1 ounce.
Calomel	..	..	..	$\frac{1}{2}$ "
Calcined Antimony	..	..	..	2 "

Mix, and grind it together in a mortar, to a fine powder, and let two drachms of it be given once or twice a-day, in conserve, till it totally disappears and the horse's appetite is restored. Then give the horse one of the Alterative Balls (which you will find on refering to "Alterative Medicine") every week for three or four weeks, and the following ball once in three or four days.

Take Nitre	.. .. .	2 ounces.
Camphor	.. .. .	2 drachms.

Mix into a ball with Honey.

By attending to the treatment here laid down, any person will be capable of managing the complaint through any stage.

## SECTION XXII.

### HURTS AND STRAINS OF THE KIDNEYS.

THE KIDNEYS of a horse may be injured in various ways, either by overloading, hard riding, or drawing. The symptoms are weakness of the back and loins, loss of appetite, faintness, a dullness of the eyes, difficulty of staling, &c., with a thick, foul, and sometimes bloody urine. From whatever cause this complaint may proceed, bleeding, in proportion to the nature of the case, should not be neglected. As soon as bled give him the following drink.

Take Balsam of Copaiva	.. .. .	6 drachms.
Liquor of Potassæ	.. .. .	1 "
Spirit of Nitre	.. .. .	2 "
Venice Treacle	.. .. .	1 ounce.
Fryar's Balsam	.. .. .	1 "

The above to be well mixed together; then add gradually one pint of warm ale.

This drink must be given every morning, fasting, for a week, or as necessity requires. If the horse appears lame, and weak across the loins, and can scarcely lift his hind parts after him, let the following charge be applied all over his loins, but not unless the above medicine should fail to relieve him.

Take Burgundy Pitch	..	..	..	2	ounces.
Oxyroceum Plaster	..	..	..	3	"
Roborans Plaster	..	..	..	2	"
Black Pitch	..	..	..	4	"
Resin	..	..	..	4	"
Horse Turpentine	..	..	1 or 2		"

To be melted together. This must be spread all over the loins before it is cold, and afterwards some short wool spread upon it; then turn the horse out to grass for a month or longer, as the case may require. The stranguary proceeds from inflammation of the kidneys, a stone in the neck of the bladder, &c. The symptoms of inflammation in the kidneys are a preternatural heat in the loins, attended with fever. When there is a stone in the bladder the urine is generally mixed with mucus; and in inflammation of the neck of the bladder, there is a great heat between the anus and the scrotum. If there be cramp in the neck of the bladder, the urine discharged will have a strong smell; and whenever the urine is obstructed by a stone in the kidneys, or urethra, the bladder will be empty, and the horse will not strive to stale as in other disorders in the urinary passages, when the bladder is full. If the urine be entirely stopped, the horse's body in a few days will be swollen to an amazing degree; and if speedy relief be not obtained his death is almost certain. If the disorder be an inflammation of the kidneys, or the bladder, bleed to the quantity of three pints or more; then give the following drink.

Balsam of Copaiva	..	..	..	1	ounce.
Oil of Juniper	..	..	..	2	drachms.
Tincture of Benzoin	..	..	..	1	ounce.
Liquor of Potasse	..	..	..	2	drachms.

Mix the preceding well together, then gradually add one pint of warm ale. This drink will remove the obstructions of the urinary passages, promote a free discharge of urine, and cleanse and heal the ulcerations. It generally mitigates the symptoms in the course of a day: if this be the case, repeat it for a few mornings in order to carry off all remains of the disease.

## SECTION XXIII.

### OF WORMS.

WORMS are of three sorts, viz. botts, teretes, or the round worms, and the ascarides. Botts are bred in the stomach and often occasion convulsions: they appear very large, and resemble maggots, with small sharp feet along the sides of their bellies, by which they adhere closely to the parts where they are bred, causing a constant irritation of the stomach; from which proceed many disorders. I have seen several horses that have been opened to ascertain the cause of their death, and after examining the vital parts, I have found that in most cases the coats of the stomach have been inflamed and almost destroyed by these vermin. If, however, the parties had had a knowledge of the symptoms and treatment, they might have removed them, and saved the lives of the horses. The botts in the stomach are commonly of a red colour; but in the straight gut they are white; the botts in the straight gut generally appear in May and June; those in the stomach generally appear at the latter end of a dry summer, when the springs are very low, and the water thick and muddy, and swarming with insects. The other sort are more troublesome than dangerous. The signs are when the horse does not thrive with his food; and being sometimes griped, he often strikes his hind feet against his belly, and voids

worms with his dung. The cure of the botts and other sorts of worms may be effected by giving the calomel ball at night and the following purging ball next morning.

#### THE CALOMEL BALL.

Take Calomel	.. .. .	2 drachms.
Licorice Powder	.. .. .	$\frac{1}{2}$ ounce.

Make into a ball with Conserve of Roses.

#### THE PURGING BALL.

Take Barbadoes Aloes	.. .. .	6 to 8 drachms,	} according to the horse.
Powdered Colocynth	.. .. .	2 "	
Gum Myrrh	.. .. .	2 "	
Ginger	.. .. .	1 "	
Oil of Savine	.. .. .	1 "	

Syrup of Buckthorn enough to form a ball.

The day previous to administering either of the balls give the horse two doses of linseed oil. After the destruction of these vermin, the horse's appetite and digestive organs are generally weak and bad. The following drink will therefore be found very serviceable to strengthen the stomach and promote digestion.

Take Gentian powdered	.. .. .	1 ounce.
Sulphate of Iron	.. .. .	2 drachms.
Ginger Powder	.. .. .	$\frac{1}{2}$ ounce.
Anise Seed powdered	.. .. .	2 "

Mix for the drink; infuse and give it in a pint of warm ale in the morning fasting. Repeat it as long as required, and give the horse a mash and warm water.

## SECTION XXIV.

## OF STRAINS IN VARIOUS PARTS.

STRAINS generally proceed from the forcible extension of the muscles or tendinous fibres, and are attended with inflammation more or less, according to the degree of injury. When a horse is strained in the shoulder, he has great difficulty in getting his injured leg forward with the other, and goes quite lame when he trots as if that leg was shorter than the other. Strains and bruises are easily discovered on the back sinews by the swelling and inflammation, which extend from the back side of the knee down to the heel, or by the lame leg appearing thicker than the other, or by a pressure of the finger and thumb on the part affected, which will give pain and make him flinch. In this complaint let the tendon from the knee to the fetlock-joint be well rubbed with one of the following mixtures: if the parts are much inflamed let them be fomented well with hot water previous to using the mixture.

## THE MIXTURE.

## No. 1.

Take Strong Spirit of Sal-ammoniac	..	2 ounces.
Camphorated Spirit of Wine	..	2 "
Goulard's Extract of Lead	.. ..	1 "
Spirit of Turpentine	.. ..	1 "
Oil of Organum	.. ..	$\frac{1}{2}$ "
Rape Oil	.. ..	8 "

Mix for use.

## THE MIXTURE.

## No. 2.

Take Spirit of Camphor	.. ..	1 ounce.
Soap Liniment	.. ..	1 "
Tincture of Opium	.. ..	$\frac{1}{2}$ "
Extract of Lead	.. ..	1 "
Vinegar	.. ..	5 "

Mix for use.



## THE MIXTURE.

## No. 3.

Take Crude Sal-ammoniac .. ..	2 drachms.
Vinegar .. ..	6 ounces.
Rectified Spirit of Wine .. ..	1 "
Tincture of Opium .. ..	$\frac{1}{2}$ "

Mix for use.

For every recent strain or bruise, in any part, the above mixtures or embrocations will be found successful. Foment the part with warm water, and well rub in the mixture twice a-day; afterwards roll a linen bandage, two or three yards long, round the part. No. 1 is the strongest mixture; but I shall leave it to your judgment to use that which you may think best. If the part should be much inflamed, No. 2 and 3 should by all means be used. If the tendons have long been contracted, and the part attended with a callous substance, and the preceding embrocations have not had the desired effect, let the following blistering embrocation be applied, which will soon remove it.

## THE BLISTERING EMBROCATION.

Take Gum Euphorbium ..	5 drachms.	} let the Euphorbium be rubbed into a paste with Turpentine.
Spirit of Turpentine ..	1 ounce.	
Then add Sublimate .. ..	$1\frac{1}{2}$ drachm.	
Pulvis Lyttæ .. ..	3 "	
Oil of Organum .. ..	2 "	
Rape Oil .. ..	6 ounces.	

The method of using this Embrocation is merely to rub it well on the parts till absorbed; one fourth or sixth part will be sufficient for one dressing; repeat it every other morning as may be required. Should it at any time be wanted stronger, two drachms more of Euphorbium can be added, and Lyttæ in proportion. I have performed with the above Embrocation the most astonishing cures in old strains, callous substances, &c. One case in particular I will state: Mr. Baylis, miller, of Painscastle, Radnorshire, had a mare that was kicked in the stifle-joint. Several

farriers had dressed it upwards of nine months until it had formed a callous substance nearly twice its natural size.' The mare, the whole of the time, could not put her foot to the ground; and at last she was in so weak a state that he determined to send her to a dog-kennel; but a friend (Mr. Meredith) to whom he expressed this intention, requested that he would send for me. I saw the mare, but in such a state that the most experienced person would have pronounced it impossible to give the animal any relief. Incredible, however, as it may appear, I can assure my readers that after two bottles of the Embrocation had been used, it stimulated and blistered the part, and produced a discharge which lessened the contraction, enabled the mare to put her foot to the ground, and in a fortnight or three weeks she was so much recovered as scarcely to be known except by the person whose business it was to attend her. I ordered the embrocation to be still used, which soon had the effect of changing the large callous substance to pus or matter, which forced itself through the skin. I then ordered it to be dressed with a little digestive ointment, after well cleaning it with warm water; and in about three weeks the mare was as upright and well as she ever was. I do not state these facts with a view of boasting of my treatment, but from a sense of the duty I owe to the public, as doubtless many a valuable horse would be lost if a work similar to this were not written, describing the symptoms, disease, and treatment, of the various diseases to which horses are subject.

## SECTION XXV.

### OF FIRING.

**FIRING** is useful to strengthen and brace the relaxed sinews, but should never be applied till the inflammation is entirely removed.

The firing-irons must be smooth, thin, and fine—the finer on the edge the better—and the lines on the sinews five in number, one down the main tendon and two on each side, about an inch distance from each other; the cross-lines must be about three quarters of an inch asunder. Care must be taken that the irons do not penetrate through the skin, which would blemish the horse, and perhaps lame him also, particularly if near a tendon. As soon as he is fired spread a blister all over the part, with a spatula, for three successive mornings; and when the blister has ceased running, turn the horse out to grass for a fortnight or three weeks, till the scurf comes off; he may then be fetched up and the following Charge applied.

#### THE CHARGE.

Take Burgundy Pitch	..	..	..	2 ounces.
Black Pitch	..	..	..	2 “
Mercurial Plaster	..	..	..	1 “
Gum Diachylon	..	..	..	2 “
Melt them all together; then add Pulvis Lyttæ and Euphorbium, of each two drachms, and mix them all together.				

This charge must be spread all over the part affected, before it is cold, and a piece of flannel, or something similar, applied over it whilst warm, and sewed on the fore part of the leg: but if a horse is fired only to strengthen the sinews or joints, it will not require the above application; the following charge will be sufficient.

Take Black Pitch	..	..	..	4 ounces.
Burgundy Pitch	..	..	..	3 “
Oxyroceum Plaster	..	..	..	2 “
Gum Dyachylon	..	..	..	1 “
Mix the whole together, and apply it as the former charge.				

When a charge is applied and repeated the hair grows long enough to have it applied without a flannel bandage; instead of which, use short wool and apply it before the charge grows cold.

## SECTION XXVI.

## WOUNDS IN VARIOUS PARTS.

WOUNDS are of various kinds; some are caused by cutting, or pricking with different instruments; others by bruising, staking, tearing, &c. All wounds in fleshy parts should be cleaned from coagulated blood, and carefully searched with the finger. If the orifice should not be large enough, the skin must be cut open; but if it be large, the whole hand may be introduced, in order to extract any extraneous bodies that may be there. If the horse be staked, it will be proper to examine what sort of a place it was where he got staked, which will enable you to judge rightly of the wound, its cure, and consequence. Wounds that you cannot bottom with the finger, and are not large enough for the hand, you can search with a candle; which, for inexperienced persons, will be more proper than a probe. If the wound bleeds much from the incision of a vein or artery, dress it with the following

## STYPTIC MIXTURE.

## No 1.

Take Oil of Vitriol	.. ..	1 ounce.
Corrosive Sublimate	.. ..	2½ drachms.

Shake it well together in a bottle, and keep it ready for use.

The wound must be dressed with a skewer dipped in the above Styptic, especially if a fleshy part, and not near a tendon or sinew. Then dress it with the following Mixture and Ointment.

## THE MIXTURE.

## No. 2.

Take Tincture of Benzoin	.. ..	1 ounce.
Compound Tincture of Myrrh	.. ..	1 "
Spirit of Turpentine	.. ..	2 drachms.
Muriatic Acid	.. ..	1 drachm.

Shake it in a bottle for use.

## THE OINTMENT.

Take Yellow Basilicon Ointment .. .. 4 ounces.  
 French Verdigris in fine powder .. 2 drachms.  
 Euphorbium finely powdered .. 1 "  
 Set it over a slow fire, constantly stirring it till dissolved.

If the wound be deep and large the horse must be thrown, with the wound upwards. Pour the mixture in so that it may reach the bottom of the wound; then pour in the ointment melted, so that it may run into the bottom of the wound; if needful stitch with a fine shred of white leather, which is better than silk or thread. Cut the stitches the second day, and let the dressing remain about three days; then dress the wound with the Tincture as well as you can with a feather dipped in it; then take a small tent of hurds, dip in the ointment, and put it in the wound, not too far. Should there be any swelling round the wound, rub some of the ointment on, composed of Marshmallow Ointment two ounces, Extract of Lead two drachms, twice a-day. If the inflammation and swelling are considerable, and the wound does not digest kindly, a gangrene or mortification may ensue, unless some speedy application be used. The parts to be fomented two or three times a-day, if the case requires it; and afterwards rub the following Blistering Oils over the part affected, and give the following drink.

## THE DRINK.

Take Emetic Tartar .. .. 1 drachm.  
 Dover's Powder .. .. 3 "

Mix, and give in a pint of ale, and repeat it every other day for three times, keeping the horse clothed. Give mashes and warm water.

## THE BLISTERING OILS.

Take Gum Euphorbium four drachms, to be first rubbed into a paste with Spirit of Turpentine, then gradually add Linseed Oil half a pint; Powdered Cantharides two drachms.

When mixed a portion may be rubbed on twice or three times a-day till the swelling abates, and the discharge of matter makes its appearance from the wound.

The Mixture (No. 2) will be sufficient with fomentations in all ordinary cases, and dressing the wound with a little digestive ointment if required; but the other mixture for dangerous cases, such as require skilful applications.

## SECTION XXVII.

### WOUNDS IN THE ELBOW, STIFLE, &c.

WOUNDS in the lower limbs, as elbow, stifle, hock, fetlock-joints, knees, sinews, tendons, &c. should be dressed with bracing medicines as follows:

#### THE MIXTURE.

Take Tincture of Benzoin .. ..	2 ounces.
Ægyptiacum .. ..	2 "
Compound Tincture of Myrrh .. ..	2 "
Oil of Turpentine .. ..	1 "

Mix, and keep it in a bottle for use.

If the mixture cannot be introduced so as to reach the bottom, it should be forced in with a syringe, and afterwards a little lint, cotton, wool, or hurds, held to the part until it has taken effect; and a plaster of ointment, spread on hurds, applied over the same, to keep it from getting dry, which must be bandaged with a flannel roller; if the parts be free from inflammation a linen one is the best. Wounds in the stifle or elbow are very awkward to bandage with a roller: instead of which, let a small tent of hurds be dipped in the above mixture, and put in the wound once or twice a-day with a probe or quill; but if the swelling and inflammation be considerable, let the part be fomented twice a-day with hot water, and afterwards rubbed well with the blistering oils twice a-day, as ordered in Section XXVI.

## SECTION XXVIII.

HUMOURS, ISSUING FROM THE JOINTS, COMMONLY CALLED  
JOINT OIL.

WHEN the capsule or ligamental purse which surrounds the joint is divided, and the synovia or joint is divided and the oil is running out, the following mixture will be found very effectual.

Take Corrosive Sublimate	..	..	..	2 drachms.
Verdigris in powder	..	..	..	2 "
Blue Vitriol powdered	..	..	..	4 "
Vinegar	..	..	..	2 ounces.
Dissolve the above.				
Ægyptiacum	..	..	..	3 "
Tincture of Myrrh	..	..	..	1 "
———— Benzoin	..	..	..	1 "

OR THE FOLLOWING.

Take Lime Water	..	..	..	1 pint.
Lapis Medicamentosus	..	..	..	5 drachms.
Compound Tincture of Myrrh	..	..	..	1 ounce.
Mix for use.				

Let a syringe full or two of either mixture be thrown into the wound twice a-day in order to restrain the discharge by acting upon the small vessels. A piece of cloth dipped in a strong decoction of alum and oak bark should be applied round the joint, and bound on tight with a compress and roller. Where neither bone nor cartilage is eroded this method will succeed and prevent a fungus, which usually attends wounds of the joints; it will also prevent the free admission of air into the joints and secure the cartilage and bone from future injury: but when by the fetidness of the discharge and the use of the probe the bones are discovered to be naked and rough, all remedies are useless unless the carious bone can be brought to separate or exfoliate; and then a stiff joint will be the natural consequence: but this can be removed by a strict application of the liquid blister.

## SECTION XXIX.

## OF ULCERS.

ULCERS are either internal or external. The internal proceed from a want of a sufficiency of fluids, which are prevented by obstruction from flowing to the extremity of the vessels; in which case a few alterative balls will be of great service: if these do not succeed, mercurial physic may be given, and repeated at proper intervals.

An external ulcer is a solution continually oozing from a soft part, for when it affects a hard part it is called a caries: ulcers or wounds so situated are often very troublesome. The first method of cure is to get rid of the caries by cutting it out with a knife; then let it be dressed with a skewer dipped in oil of vitriol: and if the wound should bleed much, a handful or two of salt and a few leather or currier's shavings may be applied and bandaged on, and remain for eight or ten hours, and the wound dressed with green digestive ointment till it has a tendency to get well; then and afterwards with the following mixture.

## THE MIXTURE.

Take Compound Tincture of Myrrh	..	1	ounce.
————— Benzoin	..	1	"
Spirit of Turpentine..	..	1	drachm.
Muriatic Acid .. ..	..	30	drops.

Mix, and apply with a feather; then take a little burnt alum and bole armenian mixed, and sprinkle it all over the sore. If the wound be too dangerous to be cut with a knife, it will be better to apply caustic to it in the following manner. If the callous part be large, holes must be made in it, and a lump of sublimate, about the size of a bean, put in each hole, and kept there with



hurds pressed in the wound. This must not be applied near a tendon, for fear of laming the horse. Care should be taken as soon as the caustic comes out, which is generally in the course of a week, to dress the part as above. Ulcers which appear on those parts where a bandage or roller may be applied, must be dressed in the same manner as with the joint oil. The following will be found very efficacious to cleanse ulcers in tendinous parts.

THE MIXTURE.

Take Sublimate in powder	..	..	2	drachms.	} mix.
Spirit of Salts	..	..	30	drops.	
Then add Tincture of Euphorbium	..	..	1	ounce.	
———— Benzoin	..	..	1	"	

Mix, and let this be applied in the manner as the medicines for the joint oil.

SECTION XXX.

THE BONE-SPAVIN, RING-BONE, AND SPLINTS.

BONE-SPAVINS are hard excrescences or swellings, growing on the inside of the hock. The Ring-bone is a hard swelling on the lower part of the pastern, and generally reaches round the fore part of the foot, in form of a ring; though it sometimes will appear only on each side of the foot; it is then called the Splinter of a Ring-bone: it generally takes its rise from the joining of the great and little pastern bones, which causes a stiffness in the joint. Spavins and Ring-bones in general are occasioned by strains, though the former may be occasioned by a blow, and the latter by a stub in the winter.

Splints are hard excrescences growing on the shank-bone of the horse, of various sizes and shapes. Where they grow large and press against the back sinews, they generally cause lameness or stiffness; others, except near the joint, seldom occasion lame-

ness. The cure is nearly the same as in the above cases. As soon as the above complaints are first discovered, they may be easily cured by the following mixture.

**THE MIXTURE.**

Take Tincture of Euphorbium	..	..	1 ounce.
————— Lyttæ	..	..	1 “
Spirit of Sal-ammoniac	..	..	2 “
Oil of Origanum	..	..	$\frac{1}{2}$ “
Sublimate	..	..	2 scruples.
Oil of Turpentine	..	..	1 ounce.

Mix for use.

Let this mixture be rubbed in with the hand for half an hour for several mornings; it operates by sweating and blistering the parts, opens the obstructions by penetrating through the ligamental purse which surrounds the joint, and by that means cures the complaint, also very obstinate strains in any part. In obstinate cases, where the part is very callous and painful, the hair must be clipped off and the following blister applied every morning, or alternate morning, for four or five times: one fourth part to be well rubbed in each time. When this treatment is finished and the blister is dry, the horse may be turned out to grass; and if any lameness still remains, he must be taken in again and the blister repeated as before. This method will cure spavins, ring-bones, and splints, of three or four years' standing.

Take Gum Euphorbium one ounce, rubbed into a paste with a little Turpentine; then add Corrosive Sublimate four scruples, previously dissolved in a few drops of Muriatic Acid; then add Pulvis Lyttæ half an ounce; Spirit of Turpentine one ounce; Oil of Origanum half an ounce; Liquor of Ammonia fortissimus one ounce; Rape or Olive Oil five ounces.

Mix for the blister.

## SECTION XXXI.

## OF THE CURB.

THE Curb proceeds from the juncture of the same bones as the spavin, and rises on the back part of the hind leg, a little below the hock, where it forms a considerable tumour : if it is soon discovered the cure is easily performed by a cooling and bracing application, composed as follows.

## THE MIXTURE.

Take Oil of Turpentine	..	..	..	3 ounces.
Spirit of Sal-ammoniac	..	..	..	3 "
Opodeldoc	..	..	..	3 "
Spirit of Camphor	..	..	..	2 "
Goulard's Extract	..	..	..	1 "
Oil of Origanum	..	..	..	$\frac{1}{2}$ "
Pale Oil	..	..	..	3 "

Mix, and let it be well rubbed in night and morning. If it be of long standing, hard, and full of pain, apply the blistering mixture as used for spavins ; otherwise, firing must be resorted to. When a curb is fired, let the irons be thin and smooth on the edge, but not too hot : the irons must be run all round the outside of the curb, so as to form in the middle of the circle ; then fire three strokes downwards, one down the main tendon, one on each side, and one in the same manner as firing on the sinews. Apply the blister in the same manner as it is used after firing the sinews. The horse must have proper rest and be turned out to grass.

## SECTION XXXII.

## TUMOURS OR IMPOSTHUMES.

TUMOURS OR IMPOSTHUMES are swellings which arise from external injuries, or internal causes : those arising from external

accidents, as blows and bruises, must first have the part well rubbed twice a-day with the following mixture.

THE MIXTURE.

Take Hartshorn	..	..	..	..	3 ounces.
Spirit of Camphor	..	..	..	2	"
Oil of Turpentine	..	..	..	1	"
— Origanum	..	..	..	$\frac{1}{2}$	"
Soap Liniment	..	..	..	2	"
Extract of Lead	..	..	..	1	"

Mix for use.

If the part will admit a bandage, let a flannel be dipped in the mixture and rolled on; but in bruises, where the extravasated blood cannot be dispersed, the best way would be to open the skin and let out the grumous matter: it may then be dressed with digestive ointment in the same manner as wounds.

When critical tumours or swellings arise from internal causes, as fevers, &c., it will not be proper to disperse them except they fall on the lower parts. Fomentations should be used freely; but if the swelling appears under the jaws, behind the ears, on the poll, withers, or groin, it must be encouraged with an irritating ointment, composed of Basilicon Ointment two ounces, Pulvis Lyttæ one drachm, and a poultice made of oatmeal, rye-flour, or linseed powder; add hogs-lard enough to keep it supple. As soon as the tumour is formed the matter may be let out with a lancet, and afterwards dressed with the ointment as above referred to, till good matter appears and the swelling subsides; let it then be healed with equal parts of Fryar's Balsam, Tincture of Myrrh, Ægyptiacum, smeared on with a feather. A little burnt alum may be sprinkled on the sore; and if fungous flesh should appear, it may be touched with a little butter of antimony or aquafortis.

## SECTION XXXIII.

## THE POLL EVIL.

THIS disease is an abscess near the poll of a horse, formed in the sinews near the poll-bone and the top vertebre of the neck; it generally proceeds from hurts or blows, strains by drawing, or a translation of matter in fevers; the last is more difficult to cure. If it proceeds from external violence, it may be often cured by rubbing the part once a-day with the following mixture.

## THE MIXTURE.

Take Spirit of Sal-ammoniac	..	..	4 ounces.
Camphorated Spirit	..	..	2 "
Oil of Turpentine	..	..	2 "
Rape Oil	..	..	2 "

Mix, and let it be well rubbed on the parts; and afterwards bleed and give a diuretic ball every other night for three or four times.

If the swelling should not become less in the course of a fortnight, recourse must be had to the Strong Liquid Blister, (Section xxx.), rubbed on once every other day for three or four times, which will soon disperse it, or cause it to suppurate. As soon as the matter is formed it must be opened with a sharp knife, made for such purpose. There is no danger in the operation if you do not cut a sinew or tendon, which runs under the mane; to avoid which, let the horse's nose be twitched, and held up to slacken the tendon. At about an inch and a half put in your knife, and examine the part with your finger; then lifting up the tendon with the same, cut up to the poll bone, and from thence along the side of the mane as far as the ulcer goes.

It is easily known how far the ulcer extends before the swelling is cut, for as far as the swelling reaches it is ulcerated under the

tendon ; when you are cutting let the operation be gentle, feeling with your finger where the tendon lies. If both sides are bad they must be treated in the same manner ; when this has been done, examine along under the mane, in order to ascertain if there be any rough or carious bones : if so, they must be removed with a knife and dressed with the following styptic.

#### THE STYPTIC.

Take Sulphuric Acid	.. ..	1 ounce.
Sublimate	.. ..	2 drachms.

Mix for use.

The wound must be well dressed with a skewer dipped in the styptic, and afterwards with the following mixture.

#### THE MIXTURE.

Take Compound Tincture of Myrrh	..	1 ounce.
————— Benzoin	..	1 “
Spirit of Turpentine	.. ..	1 “
Muriatic Acid	.. ..	2 drachms.

Mix.

As soon as the wound is dressed with the above Styptic, let some tow be dipped in the above mixture and put into the wound ; let it remain about six hours, and then take it out and dress it with the following mixture.

#### THE MIXTURE.

Take Ægyptiacum	.. ..	4 ounces.
Spirit of Turpentine	.. ..	4 “
Rectified Spirit of Wine	.. ..	4 “
Oil of Vitriol	.. ..	2 “
Oil of Origanum	.. ..	$\frac{1}{2}$ “
Red Precipitate	.. ..	5 drachms.

Mix the ingredients well together.

Before the mixture is used the abscess must be well cleaned with a sponge and warm water ; and then pour in plenty of the mixture, and take a pledget of hurds, dipped in ointment made

of equal parts of marshmallows and basilicon, and put it in the wound; dress it once a-day till well. If the mixture should not be sufficient to keep down the proud or fungous flesh, it must be touched with the styptic as before ordered. The horse should not be turned out to grass till he is quite cured, and then grass will be serviceable.

Take Corrosive Sublimate	..	..	..	2 drachms.
Verdigris, finely powdered	..	..	..	2 "
Blue Vitriol, powdered	..	..	..	2 "
Oil of Turpentine	..	..	..	8 ounces.
Coarse Oil	..	..	..	8 "
Oil of Vitriol	..	..	..	1 "
Rectified Spirit of Wine	..	..	..	4 "
Mix well together.				

The method of using this is the same as the above: both are equally successful.

In the Poll Evil it will be highly requisite to give the horse a purge once a fortnight and plenty of mashes. Let the ball be composed of the following.

#### THE BALL.

Take Barbadoes Aloes	..	..	..	6 drachms.
Calomel	..	..	..	2 "
Emetic Tartar	..	..	..	$\frac{1}{2}$ "
Ginger, powdered	..	..	..	2 "
Soft Soap sufficient to form a ball.				

In the intermediate time give one of the Alterative Balls (No. 2) every second or third night.—See Alterative Medicines.

## SECTION XXXIV.

### OF THE FISTULA, AND BRUISES IN THE WITHERS.

THIS disorder generally begins on the top of the withers; small at first, but it soon enlarges and spreads on each side. It commonly proceeds from bruises or pinches of the saddle; and

unless timely care be taken, will terminate in an obstinate ulcer or fistula. If it should originate from a bruise, and the skin be not broken, let the swollen part be rubbed twice a-day with one of the two following mixtures.

**THE MIXTURE.**

Take Oil of Turpentine .. ..	4 ounces.
Spirit of Wine .. ..	3 "
Spirit of Sal-ammoniac .. ..	3 "
Oil of Origanum .. ..	$\frac{1}{2}$ "
Linseed Oil .. ..	3 "

Mix the whole together.

**No. 2.**

Take Muriate Ammonia .. ..	3 drachms.
Spirit of Wine .. ..	1 ounce.
Tincture of Opium .. ..	$\frac{1}{2}$ "
Vinegar .. ..	7 "

Mix for use.

If the swelling should arise from a critical translation of matter in a fever, the mixture must not be used, but the swelling must be assisted to become pus or matter, by rubbing it night and morning with a little weak blister.

This method will soon break the tumour. When the wound is thus broken it must be opened with a knife, to prevent the confinement of any matter in it. Care must be taken to avoid the ligaments which run along the neck of the withers. This having been done, let it be dressed with the Styptic Mixture.

**THE MIXTURE.**

Take Sublimate .. ..	5 drachms.
Oil of Vitriol .. ..	2 ounces.

Mix.

The fistula to be dressed with a skewer dipped in this mixture night and morning. Afterwards use the following



## MIXTURE.

Take <i>Ægyptiacum</i>	..	..	..	2 ounces.
Spirit of Turpentine	..	..	..	2 "
Spirit of Wine	..	..	..	2 "
Sulphuric Acid	..	..	..	3 drachms.
Red Precipitate	..	..	..	3 "
Euphorbium	..	..	..	1 "
Cantharides	..	..	..	1 "
Vinegar	..	..	..	2 ounces.

Mix ; then shake it well, and pour some of it into the fistula. Then take a pledget of tow dipped in green digestive ointment, and place it in the fistula ; let it be dressed once a-day with this, about noon. As soon as good matter discharges, and the swelling subsides, it may be healed with the following

## MIXTURE.

Take Fryar's Balsam	..	..	..	1 ounce.
Compound Tincture of Myrrh	..	..	..	1 "
Butter of Antimony	..	..	..	20 drops.

Mix, and apply it with a feather twice a-day, and sprinkle over it a little burnt alum and bole-armenian.

I have always found the above treatment successful, and very superior to any other. Should the core of the disease be seen so that it can be easily taken out, it should be done. If the case should at any time require the mixture which contains the *Ægyptiacum*, &c., to be stronger, add two drachms of Sublimate, previously dissolved in a little Spirit of Salt. Warbles are small hard tumours which appear on the horse's back, chiefly about the saddle, and proceed from heats and cold in travelling. The cure may easily be performed by rubbing the warbles once or twice a-day with mercurial ointment.

## SECTION XXXV.

## THE GREASE, CROWN-SCAB, AND RAT-TAIL.

THE above diseases are generally known.—The Grease affects horses of gross constitution, and is occasioned by too high feeding with corn, and by not properly cleaning the legs when wet and dirty, which produces a slight inflammation of the vessels in that part, which are fed from other parts of the body, causing the legs to swell from the formation of the blood and juices into matter, which discharges a sharp eruptive stinking matter. When a horse is first observed to swell in the stable, and the swelling subsides on his being exercised, let care be taken to have his legs well washed with soft soap and warm water, and the parts afterwards rubbed for a considerable time with the hand, which can be repeated three or four times a-day to prevent the stagnation of blood, and humours obstructing the vessels in those parts. This disease is, as before observed, chiefly owing to the negligence of the groom in not cleaning the horse and giving it the exercise which it requires.

The Crown-Scab is a humour that appears round the coronet, producing an itching and scurf, which should be treated in the same manner as Grease. Rat-tails generally take their course from the pastern to the middle of the shanks, and are so called from the resemblance they bear to the tail of a rat. Some are moist, others are dry; the moist must be treated like the Grease, and the dry with mercurial ointment.

If the disease, in its earliest appearance, be treated as follows, it will soon be well.

Take Resin, in powder .. ..	4 ounces.
Nitre, in powder .. ..	4 “
Juniper Berries .. ..	2 “
Camphor, in powder .. ..	2 “
Emetic Tartar .. ..	1 “
Barbadoes Aloes .. ..	2 “
Yellow Soap .. ..	4 “

Spirit of Turpentine a sufficient quantity to form the whole into ten balls.

First bleed the horse; then give it one of the balls every night. It should also have warm mashes and exercise. Keep the horse's heels washed clean with soft soap and hot water, and poultice them with turnips and hog's lard.

If the disease be of an obstinate description, and the above treatment fail, let the following purging ball be given.

#### THE BALL.

Take Barbadoes Aloes	..	6 or 8 drachms	} according to the horse.
Salts of Tartar	..	2	"
Powdered Ginger	..	2	"
Soft Soap sufficient for a ball.			

Let the above ball be given at night, and the purging directions be attended to. The ball to be repeated once a fortnight if required; and give one of the following Diuretic Balls every night in the intermediate time.

#### THE BALLS.

Take Resin, in powder	..	..	..	4 ounces.
Nitre, in powder	..	..	..	4 "
Yellow Soap	..	..	..	4 "
Juniper Berries	..	..	..	2 "
Camphor	..	..	..	2 "
Oil of Juniper	..	..	..	1 "
Salts of Tartar	..	..	..	2 "
Spirit of Turpentine sufficient to form a mass, and divide into balls of two ounces each.				

If there should be any discharge after persisting for a sufficient time in the course I have recommended, the following Styptic Solution may be used two or three times a day; but if proper attention be paid this styptic may not be required. I should never wish to have a very strong styptic applied, particularly in the middle of the disease. If the discharge should be checked too soon, an enlargement of the parts may be expected, which it is your interest to obviate.

## THE STYPTIC SOLUTION.

Take Lime Water	..	..	..	1 quart.	} all in fine powder.
White Vitriol	..	..	..	2 ounces.	
Burnt Alum	..	..	..	2 "	
Blue Vitriol	..	..	..	1 "	
Ægyptiacum	..	..	..	1 "	

Stir the whole well together till the powders are dissolved ; then put them into a bottle, and cork it fast for use.

## SECTION XXXVI.

## WIND-GALLS, AND BLOOD OR BOG-SPAVINS.

THE Wind-gall is a flatulent or windy tumour that yields to the pressure of the finger, which being removed, returns to itself. These tumours are visible, and are seated on both sides of the back sinew, a little above the fetlocks on the hind and fore legs. First clip off the hair, and rub the following blistering liquid in every morning for three or four successive days.

Take Gum Euphorbium	..	..	5 drachms	} rub to a paste with Turpentine.
Then add Pulvis Lyttæ	..	..	3 "	
Sublimate	..	..	1½ "	
Oil of Origanum	..	..	3 "	
Oil of Turpentine	..	..	2 ounces.	
Rape Oil	..	..	5 "	

In a few days after turn the horse out to grass for a month or six weeks ; or let him be fired and blistered, and then turn him out to grass, which will take the tumour entirely away and prevent its return.

A Bog-spavin is generally though falsely called a Blood-spavin. This is a tumour which appears on the inside of the hock, which gives way to the pressure of the finger, but recovers its shape on the removal of it. A Bog-spavin generally arises from a strain in the back joint.

Some young horses will, by galloping, strain themselves in their pasterns, by which the capsular ligament which surrounds the joint is divided, and the synovia discharges itself into the bend of the hock, where it is contained in a cyst or bag of morbid matter. The horse in this disorder is generally lame and stiff in the joints, and will be found to be much hotter than usual. Let the following mixture be applied.

THE MIXTURE.

Take Soap Liniment	..	..	2 ounces.
Oil of Turpentine	..	..	2 "
Spirit of Sal-ammoniac	..	..	4 "
Oil of Origanum	..	..	$\frac{1}{2}$ "
Mix, and keep it in a bottle well corked.			

Rub the spavin once or twice a-day, for two or three weeks, with the above mixture. This will generally cure what is called blood-spavins, if not of very long standing. When the spavin is of a long date, a small orifice must be made with a lancet in about the centre of the tumour. As soon as the matter is squeezed out, take equal quantities of Fryar's Balsam and *Ægyptiacum*. Mix them together and force it into the wound with a syringe, and rub a little of the liquid blister round the outside of the wound for three successive mornings. The wound must not be dressed after the first time, and the horse should be kept in the stable for four or five days, or until the wound is quite healed. He may then be turned out to grass. If he should be weak, firing will be of great service to him, if performed neatly; and the Blistering Charge should be applied (Section xxv.) on the joint; then turn him out to grass for six or eight weeks. This method will cure the disease, however long it may have been standing. The spavin should not be opened on its first appearance; but if it has been sometime standing it will not be at all dangerous to open it.

## SECTION XXXVII.

## THE MALLENDERS AND SALLENDERS.

**MALLENDERS** and **Sallenders** are synonymous distempers : the former appears in the bend of the knee ; the latter in the bend of the hock, and discharges a sharp corrosive matter. Mallenders often occasion lameness and stiffness in the joints, and often stumbling. The cure may be performed in the same manner as for a horse that greases at the heels. First clip off the hair, then wash the parts with chamber lie, and rub the parts well with the following mixture.

## THE MIXTURE.

Take Camphorated Spirit of Wine	..	4 ounces.
Spirit of Sal-ammoniac .. ..	2	"
White Vitriol .. ..	1	"
Mix together for use.		

Then spread a plaster of green digestive ointment on tow, to be applied to the parts, and bandaged on with a roller or old stocking. When the plasters are removed wash the parts well with hot water ; and dress them every day until well. Let him be exercised, and give him a diuretic ball occasionally. Should it require a styptic to heal it, let the following be used.

## THE MIXTURE.

Take Fryar's Balsam .. ..	..	$\frac{1}{2}$ ounce.
Tincture of Myrrh .. ..	..	$\frac{1}{2}$ "
Spirit of Salts .. ..	..	20 drops.
Mix.		

## SECTION XXXVIII.

## THE LAMPAS.

THE Lampas is an excrescence on the first bar in the roof of the horse's mouth. The cure is generally performed by burning it out with a hot iron. Care must be taken to burn no more out than the first bar in the roof of his mouth, and not to burn it too deep. Then wash his mouth with salt, and the cure will be performed.

## SECTION XXXIX.

## OF THE EYE-TEETH, COMMONLY CALLED WOLVES TEETH.

THESE are small teeth appearing on the top jaw, at the distance of about half an inch or more from the grinders: sometimes they appear on one side of the mouth, at other times on both; and if suffered to remain long will very much affect the horse's eyes. They should be knocked out with a hammer and chisel, which can be easily performed at a smith's shop.

## SECTION XL.

## OF THE GRINDERS.

A horse which is kept on dry meat will sometimes slaver at the mouth. If he champs his hay and corn and puts it out again, it arises from a fault in the grinders, or from the canker. In the former, it is easily discovered by examining the internal

parts of the mouth, as there generally are great holes cut with his grinders in the weaks of his mouth. First, file his grinders quite smooth with a file—one side of which must be smooth and next the weaks of his mouth. This done, dress his mouth once or twice a-day with the mixture for canker in the mouth.—(Section XLII.)

## SECTION XLI.

### OF THE BARBS.

BARBS are substances of superfluous flesh under the tongue, which are easily discovered by drawing the tongue on one side of the mouth. The cure may be effected by cutting them off close, and rubbing the parts with a little salt. When the disease has been discovered it should not be neglected, for the horse will have but little power of drinking water, and in consequence cannot eat his usual quantity of food.

## SECTION XLII.

### OF THE CANKER IN THE MOUTH.

THE Canker in the Mouth is frequently occasioned by a rusty bit, and is known by little brown specks appearing on the tongue. But when it does not proceed from a rusty bridle-bit, it appears in small white specks, and in time will spread over the greater part of the mouth, and occasion irregular ulcers. The cure is as follows.

#### MIXTURE.

Take Vinegar	..	..	..	..	$\frac{1}{2}$ pint.
Burnt Alum	..	..	..	..	1 ounce.
Roman Vitriol	..	..	..	..	2 drachms.
Bole-armenian	..	..	..	..	4 "
Spirit of Salts	..	..	..	..	2 "
Sal Prunella	..	..	..	..	4 "

Mix.



With this mixture the horse's mouth should be dressed twice a-day, morning and night, in the following manner. Let a bit of tow, or soft linen rag, be tied to one end of a small sized cane about half a yard long. Having dipped it in the mixture, pass it up the mouth, and work it well about the parts affected. Let him fast for an hour after, and give him his meat as usual.

## SECTION XLIII.

### NARROW HEELS.

NARROW Heels are generally a natural defect in horses, but sometimes they are the effects of bad shoeing. Some farriers very improperly pare the feet until the blood starts: this method is very injurious, and causes many horses to founder in the feet, from which nothing should be pared but what is rotten and foul: and they should not be too much hollowed in shoeing. If the feet be hard and dry they should be filled every night with the following composition; but horses should not work with any stuffing in the feet. Let it be taken out before they go to work, and replaced when they return.

#### THE COMPOSITION.

Take Tar	..	..	..	..	4 ounces.
Lard	..	..	..	..	4 "
Horse Turpentine	..	..	..	..	2 "
Melt the ingredients together in an iron ladle.					

Dip a few hurds in this mixture and stop the horse's feet with them; then put splints crosswise, with each end under the shoe. When the horse's hoofs are dry and brittle, the best method is to wash them with old urine once a-day: this will strengthen the hoof and prevent its cracking after the shells are first pared off, and will so rust the nails that they will not start from the time of shoeing till he requires it again.

The narrow heels may be treated in the following manner. Take a firing-iron, not too hot, and fire from the point of the heel as far as the hoof is drawn in, between the hair and hoof, but rather more upon the hoof: this must be done upon both heels, and outside also if they bind in: fire rather deep towards the heels. As soon as the firing is finished dress the parts with the following mixture.

#### THE MIXTURE.

Take Fryar's Balsam	..	..	..	1 ounce.
Compound Tincture of Myrrh	..			1 "
Ægyptiacum	..	..	..	2 "
Oil of Turpentine	..	..		1 "
Spirit of Salts	..	..	..	2 drachms.

Mix.

A small tent of tow, dipped in the above mixture, must be laid lengthwise upon the wound, with a pledget of hurds upon it, and bandaged on with a roller or an old stocking; repeat the dressing once a-day till the wound is dried; then turn him into a straw-yard and let him continue there during the winter season, which will be more suitable for a cure. In five or six weeks after the above operation is performed a new hoof will appear round the coronet, between the hair and hoof; and as it grows it will be nearly half an inch wider than the former one.

## SECTION XLIV.

### OF HOOF-BOUND.

A horse is hoof-bound when the hoof is very tight round the instep between the hair and the hoof, and wide at the bottom resembling the shape of a bell. It is occasioned by setting on broad and hollow shoes; cutting down the toes too much, &c. If

the above complaint be attended to in time, it may be cured by easing the shoe and stopping the foot with the preparation—(Section XLIII)—and then rubbing a little blister ointment or liquid all round the instep, just above the hoof. In a few days after let the horse be turned out to grass for two or three months.

## SECTION XLV.

### ON QUITTORS.

A Quittor is an ulceration formed between the hair and the hoofs on the inside quarter of the foot. It arises from treads, bruises, and stubs; or from gravel, which works upwards, and lodges near the coronet. If the symptoms are light it will soon be cured with the following mixtures.

### MIXTURE.

Take Verdigris	..	..	..	..	1 drachm.
Sublimate	..	..	..	..	1 “
Vinegar	..	..	..	..	2 “
Honey	..	..	..	..	2 “

Reduce the sublimate and verdigris to a very fine powder: then put the ingredients into a gallipot; simmer them by the fire, constantly stirring, till the mixture acquires a light green colour and the consistency of barm or cream.

A small tent of lint dipped in this mixture must be bound on the part, and a pledget of dry hurds put upon it and bandaged on with a roller made of a stocking; repeat the dressing every fourth day if necessary: it will frequently effect a cure at one dressing. This mixture will cure the various kinds of treads, &c., on the feet of horses, and is equally efficacious for the foul in beasts' feet.

## ANOTHER RECIPE.

Take Verdigris	..	..	..	..	2 drachms.
Sublimate	..	..	..	..	2 "
Oil of Vitriol	..	..	..	..	2 ounces.

Mix; and let the part be touched with a skewer dipped in this mixture.

If the quittor is ulcered or piped use the following.

## THE MIXTURE.

Take Verdigris	..	..	..	..	1 drachm.
Sublimate	..	..	..	..	5 "
Honey	..	..	..	..	3 "
Vinegar	..	..	..	..	2 "

Powder and mix as before.

First lay upon the part a poultice of turnips and lard; let it remain on ten or twelve hours at least; when removed, let a tent of lint be dipped in the last mixture, and introduced with a skewer to the bottom of the ulcer or pipe; then lay some tow on the hole, and bandage as before. Repeat the dressing once in six or eight days till well. I have never known this remedy fail. When used as above directed, it will cure the worst of quittors.

## SECTION XLVI.

## OF THE RUNNING THRUSH.

A Running Thrush is an imposthume in the frogs of horses' feet, which have fleshy heels, or ragged and rotten frogs. The frog must be first pared as far as it is hollow, and the part rubbed with the following mixture.

## THE STYPTIC.

Take Lime Water	..	..	..	..	1 pint.
White Vitriol	..	..	..	..	1 ounce.
Blue Vitriol	..	..	..	..	1 "
Burnt Alum	..	..	..	..	1 "
Ægyptiacum	..	..	..	..	1 "

The ingredients to be finely powdered and dissolved in the lime water ; then lay a small pledget of hurds dipped in the *Ægyptiacum* upon the thrush, and a pledget dipped in tar over the whole, splinted fast under the shoe. This must be repeated once every day till the horse is well, and rub the part once a-day with the mixture after the cure is effected, to prevent the disorder's returning. Diuretic balls must also be given occasionally during the cure.

## SECTION XLVII.

### OF THE CANKER.

A Canker in the foot generally proceeds from the running thrush, which spreads under the sole of the foot, till it falls off and turns rotten and putrid. First pare the foot down ; then with a knife, bent in the form of a basin when broken in two parts, pare out the rotten and putrid flesh which grows on the bottom of the foot, taking care not to cut deeper than the rotten part, lest it should injure the coffin-bone. Then let the shoe be put on with as few nails as possible, and take a handful of salt and lay it over the part which is cut ; then wedge it fast up with tow, which will stop the bleeding. The next day take off the dressing, and examine if the shoe press on a tender part ; if so it must be pared quite thin, or if hollow underneath it must be taken out ; and, if necessary, the part must be dressed every time you do it. Rub the part with *Ægyptiacum*, and dip small pledgets of tow in it, and lay them upon every part affected with canker ; after lay a pledget of tow dipped in tar over the whole, and dry tow over that. The dressing must be splinted to the foot as fast as possible, as that will be the means of performing the cure sooner. The foot must be dressed once a day as before directed ; and if any fungous flesh appears, sprinkle over it a little sublimate or verdigris, in powder. Sometimes this disorder

causes the horse to lose a hoof; it then becomes very troublesome to cure, for if the shoe cannot be made fast, it is impossible to make the dressing fast, unless something be made for that purpose. Therefore, to prevent the hoof's falling off, let it be well dressed every day with the following mixture.

#### THE MIXTURE.

Take Camphorated Spirit of Wine .. ..	4 ounces.
Spirit of Sal-ammoniac .. ..	2 "
White Vitriol .. ..	1 "
Bole-armenian .. ..	1 "

Mix together in a bottle.

Before the foot is dressed the cankered part and round the in-step must be dressed with the mixture. This method will preserve the hoof from falling off; and with the help of the above instructions any skillful person can effect a cure of the worst description.

### SECTION XLVIII.

#### ON GELDING.

GELDING is an operation well known to most persons. The usual way is to cauterise the extremities of the spermatic vessels, and fill up the scrotum with digestive ointment melted. But when the operation is required to be performed on a full-grown horse, great care and ingenuity are required. As soon as the scrotum is opened, and the stones are discharged, a strong wax thread must be tied round the spermatic vessels, and the testicles cut off, which must be afterwards dressed with the digestive ointment. If the swelling and inflammation are considerable, give the horse one ounce of nitre twice a-day, and foment the parts well with hot water; then rub a little of the following ointment in twice a-day.

## THE OINTMENT.

Take Ointment of Marshmallows .. ..	4 ounces.
Gum Camphor .. ..	2 drachms.
Linseed oil .. ..	1 ounce.
Extract of Lead .. ..	$\frac{1}{2}$ "

This treatment will preserve the horse from the danger attendant on these operations.

## SECTION XLIX.

## OF DOCKING.

**DOCKING** or cutting off a horse's tail is an operation generally known, and seldom attended with any danger. The operation is best performed with an engine, used for that purpose by the farriers; when the part is taken off let it be gently seared with a hot iron, till the blood is stopped. Then lay a little resin upon it, and apply the iron to it until it runs over the strut. This is all that is requisite in docking a horse. Sometimes a gangrene and inflammation may succeed, if the tail be fleshy or stunted too close to the rump. In this case skilful treatment must immediately be resorted to. Give the following mixture twice a-day, and foment the part twice a-day, rubbing it with blistering liquid. This treatment must be strictly observed till the inflammation subsides.

## THE MIXTURE.

Take Emetic Tartar .. ..	1 drachm.
Nitre, in powder .. ..	2 ounces.
Mix and give in ale or beer.	

## SECTION L.

## OF NICKING.

**NICKING** is an operation performed to make the horse carry a neat and elegant tail. This operation should be performed in

a mild and temperate air. First, let the horse be thrown down, and about four or five nicks made in the tail, if it be sufficiently long. The first nick must be made about an inch and a half or two inches from the rump; the others at a proportionate distance from each other. The great art in nicking is, to cut deep enough on each side the under part of the tail, as there are two tendons or sinews on each side, the ends of which will rise up after they are cut. As soon as the tail is nicked, small pledgets of tow must be dipped in equal quantities of tincture of myrrh and oil of turpentine, and applied; then a pledget of dry hurds must be put over them and tied on with laps of tow that the blood may be stopped. When this is done let the horse be walked twenty minutes; then put him in the stable; and the day following cut the laps at night, without removing the dressing. On the next morning remove the old dressing, and dress it with the following until well.

#### THE MIXTURE.

Take <i>Egyptiacum</i> .. .. .	4 ounces.
Oil of Turpentine .. .. .	3 "
Mix.	

A small pledget of tow, dipped in the mixture, must be applied on every nick, and tied up with laps of tow or cloth as before; then put the horse into pulleys; but as all the art of making a horse carry his tail well consists in this, care must be taken in the execution. The pulleys should be fixed about a yard above the horse's shoulder, in order to bring the end of his tail within five inches of the croup. The method of fixing it must be according to the position of the horse. If he is placed on one side of his standing more than another, the pulleys must be fixed to that side to keep his tail straight. Let the dressing be repeated every other morning for eight or ten days; afterwards anoint the wounds once a-day with the mixture, and then sprinkle a little resin upon them till well. The horse to be gently walked out. If he should not carry his tail straight, the pulleys must be altered to one side, according as he stands in the stable.



## SECTION LI.

## OF FALSE QUARTERS AND SAND CRACKS.

A Sand Crack is a little cleft running in a straight line down the hoofs; and sometimes through the horny part, which, in process of time, often grows out of itself. If the crack passes through the ligaments which join the hoof with the coronet, it must be treated in the following manner: First rasp the cleft thin and wide, close to the hair; and with a firing-iron, moderately heated, fire across the cleft, between the hair and the hoof, and dress in the same manner as for the false quarter.

A False Quarter is the affection of one part of the hoof by a long-continued quittor, which renders the quarter useless, and the horse frequently lame. The following will be found an effectual cure in these cases: First rasp the quarter thin throughout; and then with a firing-iron, gently heated, fire precisely between the bar and hoof, beginning at the corner of the heel, and going forward half an inch or an inch, upon the sound part of the foot, and fire it pretty deep through the ligament which unites the hoof and the coronet. This being done, dress the wound with the following ointment for a week or ten days; then heal it with an equal quantity of Fryar's Balsam and Ægyptiacum mixed together.

## MIXTURE.

Take Yellow Basilicon	..	..	..	2 ounces.
Oxyd of Bismuth	..	..	..	2 drachms.

Mix.

Let the horse be kept in the stable till the wound is healed; and afterwards turned into a straw-yard, to continue there the winter; this operation being best performed at the end of the year.

In six or eight weeks after the horse is fired a new hoof will appear all round the coronet as far as he was fired. When it is grown half an inch down, and out of form, it must be brought into shape by rasping and washing with old urine. As soon as the quarter is grown down, and the horse begins to work again, every time the horse is new shod the feet must be washed with old urine, which will harden the hoof and prevent the nails working out.

## SECTION LII.

### OF WOUNDS IN THE FEET FROM GRAVEL, NAILS, &c.

HORSES in general are more subject to wounds in the feet than any other part of the body; and, for want of timely care and proper treatment, they often prove serious, these parts naturally being tender and exposed to inflammation. When matter is found in any part of the foot, it must be discharged; if not, the bone, which is of a spongy nature, soon becomes affected, and the whole foot in danger. The most dangerous part of a horse's foot, when stubbed, is the point of the frog, being near the coffin-bone. When any foreign bodies are lodged in the feet, such as nails, stubs, thorns, &c., the foot must be pared with a drawing-knife, to the quick, all round the part, and the bodies extracted as soon as possible. If the wound be slight, a little turpentine poured on it, and set on fire, will cure it: but if it penetrates so deep as to affect the coffin-bone, the cure should be performed as soon as possible; for which use the following

#### MIXTURE.

Take Fryar's Balsam	..	..	..	1 ounce.
Tincture of Myrrh	..	..	..	1 "
Oil of Turpentine	..	..	..	$\frac{1}{2}$ "
Spirit of Salts	..	..	..	2 drachms.

Mix for use.

Let a small tent dipped in this mixture be applied to the wound; if it be a slight one, the tent must only be laid over the mouth of it, and a little of the following stopping mixture should be applied on the dressing.

THE MIXTURE.

Take Tar	..	..	..	..	..	4 ounces.
Bees' Wax		..	..	..		4 "
Hogs' Lard	..	..	..	..		3 "
Horse Turpentine	..	..	..	..		2 "

Melt them together for use.

When the wound has been dressed with the above mixture, a small quantity of the stopping must next be melted in an iron ladle, and the foot stopped up with tow dipped in it, and two splints put across to fasten it on. The above is an effectual cure for all kinds of wounds in the feet, proceeding from pricks in shoeing, or from gravel, stubs, thorns, nails, &c. First, the foot must be well cleaned with a drawing-knife, and the piece or particle extracted with a pair of nippers, if any remain behind. Should this prove unsuccessful, and the horse not recover from his lameness, and the matter discharged be thin, bloody, or offensive in smell, the wound must be opened with a drawing-knife to the bottom, and then dressed as before directed. If a nail should penetrate the joint of the foot, so as to endanger the cartilages which surround the joint, and cause the synovia or joint-oil to discharge, it is very difficult to cure. In cases of this sort no time should be lost in dressing the horse in the manner directed in Joint Oil.

Some country farriers have a bad method of treating a horse that is lame in the foot. After the foot has been pared quite thin, and the horse so far recovered from his lameness as to be able to work, the farriers generally wedge the lame part under the shoe, with tow, to prevent the gravel's working to the wound. This is wrong, as the pressure of the tow fills the lame part with pain, and the gravel is sure to work between the hoof and the

tow, so as to make it almost impossible to be extracted, and the horse then becomes as lame as he was at first. To prevent which, a horse when lame in the foot must not work with any kind of stopping in it, but should be shod so as to ease the part and to allow the gravel to wear out. When he comes from work the feet must always be well washed and dressed with the following mixture.

**THE MIXTURE.**

Take <i>Egyptiacum</i>	..	..	..	3 ounces.
Vinegar	..	..	..	2 "
Verdigris, in fine powder	..	..	2 drachms.	
Blue Vitriol, in fine powder	..	..	2 "	
Corrosive Sublimate, in powder	..	..	2 "	
Compound Tincture of Myrrh	..	..	1 ounce.	
Fryar's Balsam	..	..	1 "	

Mix.

A little of the above mixture can be forced into the wound with a syringe, twice a-day, in order to restrain the discharge ; a strong decoction of alum and oak bark should also be applied, and a little liquid blister rubbed all round the part above the hoof every other day.

## SECTION LIII.

### OF THE COLT EVIL.

THE Colt Evil chiefly affects young stoned colts, which have full liberty with mares before they are able to cover them. This disorder generally causes the skin to fret off the horse's yard, and the sheath to swell, owing chiefly to dirt or filth lodging in the parts, which may be removed by washing them clean with warm water, and then applying a little warm vinegar and sweet oil ; but should the yard be too much swollen, let it be fomented with hot water, and then apply the following mixture two or three-times a-day.

## THE MIXTURE.

Take Extract of Lead	..	..	..	1 ounce.
Vinegar	..	..	..	4 "
Spirit of Camphor	..	..	..	1 "
Salt of Tartar	..	..	..	2 drachms.
Linseed Oil	..	..	..	8 ounces.

The excoriation or fretting of the glands may be gently rubbed once every day with a little mercurial ointment. The oozing from the yard is a gonorrhoea. It is chiefly owing to high feeding in young horses, and a relaxation of the glands and seminal vessels, occasioned by frequent emissions. This disorder may be cured by giving the horse the purge.

## THE PURGE.

Take Barbadoes Aloe	..	..	5 or 6 drachms.
Ginger	..	..	2 "
Salt of Tartar	..	..	2 "
Soft Soap sufficient for a ball.			

And a diuretic ball may be given every other morning for a fortnight if required. If the case should be desperate, and the above treatment fail, it will be requisite to give the following mixture and use the injection. The horse should have plenty of mashes and warm water.

## THE MIXTURE.

Take Balsam of Copaiva	..	..	$\frac{1}{2}$ ounce.
Liquor of Potassæ	..	..	1 drachm.
Mucilage of Gum Arabic	..	..	2 ounces.
Pure Sulphuric Acid	..	..	1 drachm.

Mix; then gradually add one pint of linseed tea; give it immediately, and let it be repeated once or twice a-day if required. Although under I give the injection, yet it is seldom required after giving the above.

## THE INJECTION.

Take Sugar of Lead	..	..	..	$\frac{1}{2}$ drachm.
White Vitriol	..	..	..	$\frac{1}{2}$ "
Oxymuriate of Mercury	..	..	..	3 grains.
Tr. Opium	....	..	..	3 drachms.
Water	..	..	..	1 pint.

Mix, and let two or three syringefuls be injected up the part twice a-day.

## SECTION LIV.

## OF THE ANTICHOE, OR FELTORIC TUMOUR.

THIS disorder commences with a malignant swelling in the breast, and extends along the belly as far as the sheath; it is attended with fever and inflammation, great depression, weakness, and loss of appetite. This last symptom is owing to inflammation, which in some instances affects the whole gullet and throat, and is very dangerous. To effect a cure the following must be given.

Take Epsom Salts	..	..	..	6 ounces.
Nitre	..	..	..	2 "
Grains of Paradise	..	..	..	2 drachms.
Powdered Jalap	..	..	..	$\frac{1}{2}$ ounce.
Mix.				

To be given in a quart of warm ale, and when it has done operating give the following.

Take Gentian in powder	..	..	..	1 ounce.
Sulphate of Iron	..	..	..	2 drachms.
Virginia Snake Root, in powder	..	..	..	$\frac{1}{2}$ ounce.
Salt of Tartar	..	..	..	$\frac{1}{2}$ "
Sulphuric Acid, pure	..	..	..	30 drops.
Mix.				

Give it in a pint of warm ale, every morning, until the swelling abates and he is well. Then let the following blistering liquid

be well rubbed on the part once every day: about one fourth or sixth part of the mixture at one dressing will be sufficient. This mixture will act very gently as a blister, either by causing a determination of the disease to the skin, or by causing it to suppurate; in which case it can be opened with a lancet and the matter let out: it may then be dressed with a little digestive ointment; but care should be taken not to attempt to open the wound until it is quite ripe for the operation.

#### THE LIQUID.

Take Gum Euphorbium	..	..	..	4 drachms.
(rubbed into a paste with a little of the Spirit of Turpentine.)				
Then add Sublimate	..	..	..	1 drachm.
Powdered Lytta	..	..	..	3 "
Oil of Turpentine	..	..	..	1 ounce.
Oil of Origanum	..	..	..	2 drachms.
Rape Oil	..	..	..	6 ounces.
Mix.				

### SECTION LV.

#### OF THE FOUNDER IN THE FEET.

THE Founder in the Feet arises from a cold after violent exercise, drinking cold water, riding into ponds, &c. when in a state of perspiration; this brings on a fever, which, for want of proper management, settles in his feet. When the horse is thus affected after violent exercise, &c. administer the following ball.

#### THE BALL.

Take Calomel	..	..	..	2 drachms.
Opium	..	..	..	$\frac{1}{2}$ "
Make it into a ball with conserve of roses.				

And give it to the horse as soon as possible, and the following purge next morning. Let him have plenty of warm mashes during the disease.

THE PURGE.

Take Barbadoes Aloes	..	..	..	6 drachms.
Ginger	..	..	..	2 "
Salt of Tartar	..	..	..	2 "
Soft Soap sufficient to form a ball.				

After the physic has ceased to operate, let the horse be treated as in other fevers. If there should be a constipation of the bowels, a clyster must be administered once a-day. Let the parts round the fetlocks and pasterns be well blistered with liquid blister. If the above method be attended to, it will prevent the settling of the fever in the feet. When a horse has been foundered a considerable time, small lumps, the size of a finger or thumb-end, will frequently rise on each side of the heel, upon the coronet; these may be called splints of a ring-bone, arising from pain in the feet. As soon as the blisters have done running the horse should be turned out to grass, or in a good straw-yard, and run there for two or three months. Let the blister be repeated for three or four successive mornings, taking care to clip the hair off quite bare; and remember to tie the horse's head to the rack, and remove the litter, to prevent his rubbing off the blister. Next, firing and blistering will be serviceable for some horses when their feet remain tender. Horses that have been foundered should not have the soles of their feet pared too soon, as the air will penetrate and the feet will be considerably contracted. The sole being the main support of the horse's foot, none but the loose or hilly parts should be pared; for if the feet be ever so strong, sound, or good, and the sole constantly pared or drawn thin with a drawing knife, every time he is shod he will become lame, tender-footed, and in time as bad as one that is foundered.



## SECTION LVI.

## OF ROWELLING.

ROWELLING is useful in certain cases. When this operation is performed the skin must be cut, so as to get a finger or thumb into it, which must be worked about till the skin is parted from the body, three or four inches round; then dip the rowel in a little digestive ointment melted. When the rowel is put in, two or three tents of tow, dipped in the same ointment, must be applied with it. Let the horse have warm water for two or three days. A fortnight or three weeks is deemed sufficient time to have the rowel in. Rowelling is useful in old strains of long standing, either in the shoulder, stifle, or whirlbone. When a rowel is used in the shoulder, it must be about three or four inches below the joint of the shoulder. When good matter appears, take out the tent, and turn the rowel every two or three days. The same distance should be observed in the whirlbone, the stifle, and inside the thigh. The use of rowelling in these cases is to relax the capula or ligamental purse, which surrounds the joints, and thus to make way for the thick blood and matter which had formed there from the severity of the strain. It is likewise proper in diseases of the eye, sleepiness, staggers, pains and internal inflammation, &c. A horse should not be rowelled if poor, surfeited, or hide-bound.

## SECTION LVII.

## LOTION FOR HORSE'S SHOULDERS, ETC.

Take Sulphate of Zinc	..	..	..	2 ounces.
Spirit of Camphor	..	..	..	2 "
Goulard's Extract of Lead	..	..	..	1 "
Vinegar	..	..	..	1½ pint.

Mix for a lotion.

## OR THE FOLLOWING.

Take Sugar of Lead	..	..	..	2 ounces.
Spirit of Camphor	..	..	..	2 "
Tincture of Opium	..	..	..	1 "
Spirit of Hartshorn	..	..	..	1 "
Vinegar	..	..	..	1½ pint.

Mix for a lotion.

Either of the above will be found very excellent for sore shoulders, or injury from saddles. Let the part first be fomented with hot water, and then with some of the lotion twice or thrice a-day.

## SECTION LVIII.

## CRACKS IN THE HEELS.

THIS complaint is considered to proceed from hard riding or driving, and is attended with great inconvenience to the horse and owner, for if no remedy be applied in proper time the horse may be subject to fever in the feet, so as to require blistering and rest; but if the following be attended to, he will soon be well. First let the horse's feet be well washed and cleaned with soft soap and hot water; then apply the following ointment.

Take Mercurial Ointment	..	..	..	3 ounces.
Oxyd of Bismuth	..	..	..	½ "
Oil of Origanum	..	..	..	2 drachms.
Linseed Oil	..	..	..	½ ounce.

Mix for an ointment, and let it be applied night and morning.

## SECTION LIX.

## RED WATER.

THE Red Water in horses is much less frequent than in horned cattle, and does not generally proceed from the same

causes. It is produced by some internal injury, such as strains of the loins, bruises, &c. ; and if not speedily removed it will be attended with serious consequences. By attending however to the following it will soon become well.

THE MIXTURE.

Take Carbonate of Iron	..	..	..	2 ounces.
Alum, in powder	..	..	..	1 "
Nitre, in powder	..	..	..	2 "
Epsom Salts	..	..	..	8 "
Spirit of Turpentine	..	..	..	1 "
Mix for one dose, and repeat it if required.				

If any weakness should remain it will be proper to apply a charge over the part.

END OF PART THE FIRST.

## PART THE SECOND.

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### ON HORNED CATTLE.

#### SECTION I.

##### FELLON, EPIDEMIC COLD, OR INFLUENZA.

THIS disorder in general proceeds from a sudden change of the atmosphere, from a warm and moist air to a piercing cold and dry wind, which affects the whole frame by closing the pores of the skin, and in a measure retarding perspiration. In cases of this kind the hide becomes thickened, and the hair, which is very rough, appears to stand the wrong way on the animal's back. Cows are most liable to be affected with influenza, in consequence of the unchangeableness of the weather, and being more tenderly managed, by being housed during the winter. The long prevailing north and north-easterly winds, at the spring of the year, often occasion dangerous and fatal diseases. The symptoms produced by taking cold are a heaviness in the head, a sluggish movement, weak eyes, sudden depression of the milky secretions; and if the hand be pressed upon the chine or any part of the back, the animal will instantly give way: this generally is called the joint fellow, and is best understood by that

name in the country. At other times the joints are more affected than any other part, and it is then called the joint fellow. Old cows are most subject to this complaint, especially a short time before calving: this will occasion much trouble to the owner; which, if proper care had been taken, might have been prevented. When this happens, until the time of calving they generally require assistance at rising; in other respects they appear well and eat their food as usual. In the cure of colds it will be proper first to give a warm cordial drink, which, by acting as a stimulant in the stomach and intestines, will give increased action to those parts and enable nature to resume her proper course.

#### THE CORDIAL DRINK.

Take Cummin Seed ..	..	..	..	2 ounces.
Anise Seed ..	..	..	..	1 "
Carraway Seeds ..	..	..	..	2 "
Capsicum ..	..	..	..	2 drachms.
Gentian Powder ..	..	..	..	1 ounce.
Mix.				

Pour a quart of boiling ale over it and cover it down till lukewarm, and then give it to the beast. By the above means the quality of the ingredients will be extracted and preserved. The next day give the following

#### DRINK.

Take Diaphoretic Antimony ..	..	..	2 ounces.
Flower of Sulphur ..	..	..	1 "
Gum Camphor, in powder ..	..	..	3 drachms.
Capsicum, in powder ..	..	..	$\frac{1}{2}$ ounce.
Nitre, in powder ..	..	..	1 "
Mix.			

Let this drink be given in a quart of warm ale, and repeat it every other day as may be required. Give the beast in two hours afterwards a mash of scalded bran and a little barley meal in it.

It is very necessary to examine the sick animals every day, to watch them while they dung and stale, and to see if the body be of a proper heat, and the nose or muzzle of a natural breeze. If these be regular there is not much danger. Feverish symptoms sometimes appear, so as to cause a constipation of the bowels, and if not speedily relieved they will be in danger. In such cases let the following purging drink be given.

**PURGING DRINK.**

Take Glauber's Salts	..	..	..	1 pound.
Nitre, in powder	..	..	..	1 ounce.
Ginger in powder	..	..	..	1 "

Put the ingredients into a pitcher, and pour three pints of boiling water upon them; when lukewarm give the drink.

In most cases this drink will be found sufficient to purge a full-grown animal of this kind. If it should fail in its operation in sixteen or twenty hours, let one-half of the above quantity be given every night and morning until the desired effect is obtained. By strict attention to the above method of application a severe fever may be prevented, and the animal speedily restored: but every stage of this epidemic is attended with intermittent fever. After the intestines are sufficiently evacuated, it will be proper to repeat the cordial drink a few times.

## SECTION II.

### INFLAMMATION OF THE LUNGS.

THIS disease is very frequent among horned cattle, and is produced by a variety of causes. Cold dry harsh winds are severely felt, by closing the pores of the skin and checking perspiration. It is frequently brought on by beasts drinking cold water when they are overheated. It is sometimes produced by

turning them into fresh pastures, when their stomachs being overcharged with herbage, the pressure produced on the lungs is very great; the sily and viscid part of the blood becomes crassus or thick, and obstructs the vessels, and brings on a troublesome cough and wheezing. These symptoms are a sure indication of an affection of the lungs. The discharge from the nostrils and mouth continues to be copious; the inflammatory symptoms make but little progress; but as soon as this discharge is stopped the inflammation increases, and if not timely checked, will soon terminate in the animal's dissolution. Symptoms of inflammation taking place are discovered by the alternate heat and cold of the body,—in the extremities for the most part; especially the ears, horns, and feet. If the animal be in a low condition, weak, and much debilitated, bleeding is seldom necessary; but if in high condition, and the fever increases, and the body feels hot and dry, and the breathing be the same; if the eyes are much inflamed, and the white has a yellow appearance, bleeding becomes highly necessary; and from two to four quarts of blood may be taken away according to the strength and condition of the animal; and if found necessary let it be repeated; or a small quantity may be taken away every day. Sometimes this disease has a false appearance; the fever and heat are scarcely perceptible: at other times it seems rapid in its progress. This disease appears in a great measure to proceed from a deficiency of bodily vigour, and a consequent inability of carrying on a due circulation through the vessels. The blood, through these impediments, becomes surcharged with pituitous lentor, so that the glands cease to secrete the bile, which is not poured into the intestines, but becomes deposited on the skin. Hence is produced the jaundice, which is known by the yellowness of the eyes and different parts of the body. The cure must be attempted according to the symptoms already stated. The costive state of the animal's body, which accompanies this disease, must be strictly attended to. First give the following purging drink.

## THE PURGE.

Take Glauber's Salts	.. ..	1 pound.
Nitre, in powder	.. ..	1 ounce.
Ginger in powder	.. ..	1 "

Pour three pints of boiling water over the above, and give it lukewarm. In most cases this will be found sufficient for a full-grown animal of this kind. Should it fail in its operation, one half of the above may be given night and morning until the desired effect is obtained. The above drench will generally operate in twenty-four hours; if not, proceed as I have ordered, and after the bowels are properly opened give the following drink.

## THE DRINK.

Take Emetic Tartar	.. ..	1 drachm.
Pulvis Digitalis Recentis	.. ..	1 "
Gum Camphor	.. ..	2 "
Salt of Tartar	.. ..	$\frac{1}{2}$ ounce.
Nitre, in powder	.. ..	1 "
Mix		

Give it in a pint or quart of warm ale, and repeat one half of it every eight hours. If the fever continues after the intestines have been evacuated, it will be proper to take some blood from the animal, and the quantity must be regulated according to the disease and habit of body, and the purging drink repeated to prevent costiveness. The drink that is to be administered after the purging drink will be found to operate powerfully in removing the disease, by promoting insensible perspiration, and in dissolving and evacuating the phlegm in the ventricles and intestines; also opening and cleansing the vessels of the lungs, and promoting a discharge of urine, and lowering the velocity and force of the pulse. If any symptoms of the disease should still remain, it will be proper to give the following drink.



## THE DRINK.

Take Valerian Root, in powder	..	..	2 ounces.
Dried Squills in powder	..	..	2 drachms.
Gum Myrrh in powder	..	..	2 "
Balsam of Copaiva	..	..	1 ounce.
———— Sulphur	..	..	1 "
Nitre, in powder	..	..	1 "
Tincture of Opium	..	..	$\frac{1}{2}$ "
Salt of Tartar	..	..	2 drachms.

The Balsam of Copaiva, Sulphur, and Salt of Tartar, to be well rubbed together in a mortar first; then add the other ingredients; lastly, one quart of warm ale, and then give it to the beast.

## SECTION III.

## THE YELLOWS OR JAUNDICE.

THIS is a common disease among neat cattle, and proceeds from the gall bladder and cystic duct. The gall is a yellow liquor separated in the liver, and collected in the gall-bladder. Its greatest use is to mix with the chyle, to rouse the peristaltic motion of the intestines, and to finish digestion. This Saponaceous juice corrects the acidity of the stomach and bowels, and its salutary effects are felt all over the body. The Yellows or Jaundice consists in a diffusion of the bile throughout the body, and favoured by every thing that obstructs its passage into the duodenum. This disease is first observable in the white of the eyes, which appear yellow; and as it increases, the whole skin becomes impregnated with the same yellow hue; it is most conspicuous in the ears, tail, mouth, and eyes. Every stage of this disease is attended with weakness, great debility of the nervous system, and listlessness and want of appetite. When in the pasture the beast wanders about alone by the side of hedges or fences, in a dejected state. These appearances sufficiently indicate the disease. Milch Cows

are the most subject to it in the spring and latter end of the year; although they are not exempt from it at other times. The most dangerous disease of this kind is when a schirrous liver is the cause. The fluctuating state of the weather has a powerful effect on the bodily frame, in retarding or promoting the cure. Care should be taken to house the animal at all unfavourable seasons. As soon as the disease makes its appearance it may be removed by administering the following drink.

## THE DRINK

Take Epsom Salts	..	..	..	..	4 ounces.
Nitre, powdered	..	..	..	2	"
Turmeric Powder	..	..	..	2	"
Castile Soap	..	..	..	2	"
Salt of Tartar	..	..	..	2	"
Dover's Powder	..	..	..	1	"

Mix and divide in two parts. Let one be given in a quart of warm ale, and repeat in forty hours if required. I have never yet known the above drink fail of effecting a cure in common cases. If the disease does not give way to the above treatment, but still keeps on the increase, give the following purging drink.

## THE DRINK.

Take Glauber's Salts	..	..	..	..	1 pound.
Nitre	..	..	..	..	1 ounce.
Barbadoes Aloes	..	..	..	..	2 drachms.
Emetic Tartar	..	..	..	1	"
Ginger	..	..	..	..	1 ounce.

After this has had the desired effect, give the above drink, and repeat it every third day, two or three times, if needful. As soon as the cause is removed, the following mixture will restore the animal to its former health: if it be a milch cow its former flush of milk will soon return.

## THE MIXTURE.

Take Anise Seed	..	..	..	..	2 ounces.
Cummin Seed	..	..	..	..	1 "
Gentian powdered	..	..	..	..	1 "
Sulphate of Iron	..	..	..	..	3 drachms.
Capsicum Powder	..	..	..	..	3 "
Nitre, in powder	..	..	..	..	1 ounce.

Mix.

Pour a quart of warm ale over the whole, and cover it down.  
 Give it lukewarm, and repeat it if required. Great care ought to be taken to keep the bowels open through every stage of the disease, for if costiveness be permitted the fever will increase; and if not timely removed will terminate fatally.

The Rev. W. Waters, of Hay, Breconshire, had a beast troubled with the yellows; for six days various medicines were administered to her by different persons, also a variety of clysters, without even producing a single action of the bowels. The Rev. Gentleman waited upon me, and after stating the above facts, he said he was of opinion that it was impossible to save the life of the beast. Notwithstanding this I accompanied the Rev. Gentleman to his farm, and I immediately saw there was no time to be lost. I first ordered a small furnace of water to be heated, and then two persons to foment the bowels with the hot water for two or three hours; meanwhile I prepared the medicine, and having administered it to the beast, it in less than twenty-four hours produced a copious discharge, and continued to operate for two or three days. I ordered plenty of gruel to be administered for the purpose of assisting the action of the medicine. On the second or third day I offered the beast a little hay, which it ate, but not with its accustomed voraciousness. The following day being warm and fine, I ordered the beast to be turned out for a few hours in the grass, and observed that she ate and enjoyed it much. I then administered stomachic medicines, which, in a few days, restored her to her former health, and she was sold at the following fair for eighteen guineas. A small farmer, named Price, who lived on the adjoining estate, had a beast attacked at

the same time with this disease, and it died on the seventh day in consequence of constipation of the bowels; but its life, I have no doubt, might have been saved had the same medicines been administered to it as those which I prescribed for the Rev. W. Waters' beast. The medicines administered were as follows:

#### THE MIXTURE.

Take Castor Oil .. ..	1 pound.	
Croton Oil .. ..	15 drops.	} mix first, then the Castor Oil.
Spirit of Wine .. ..	2 drachms.	
Barbadoes Aloes - ..	2 "	
Nitre, in powder .. ..	1 ounce.	

Mix for a drink, and give plenty of gruel afterwards. This drink can be given with the most decided success in obstinate cases, either to horses or beasts, when every other medicine has failed. The following was the

#### CORDIAL.

Take Anise Seed .. ..	1 ounce.
Cummin Seed .. ..	1 "
Gentian .. ..	1 "
Sulphate of Iron .. ..	2 drachms.
Nitre .. ..	1 ounce.
Ginger, in powder .. ..	1 "

Mix, and give it in a quart of warm ale, and repeat the dose every second or third day, two or three times if required.

### SECTION IV.

#### INFLAMMATION OF THE BRAIN.

THIS disease is commonly called the frenzy, and is most prevalent in the summer season. Inflammation of the brain is sometimes occasioned by severe heat of the sun, by fevers, or

by inflammation in some part of the body, which is transferred to the brain. The cause is too great an efflux of blood, pressing on the temporal arteries; from which an increased action of the vessels takes place. The symptoms that usually precede inflammation of the brain are a kind of madness, attended with ravings, constant watching, slow respiration, and a strong pulsation in the temporal arteries. The animal appears in a fierce state, as if seized with a restless kind of madness; the eyes appear much inflamed as if they were ready to start from the head; the beast often suddenly falls down and rises again, until nature is exhausted: a constant trembling and starting of the tendons, a dry and harsh skin, a suppression of urine, grinding of the teeth; and a want of rest, are also symptoms, and very unfavourable ones, of the disease.

Frenzy, or Inflammation of the Brain, sometimes arises from wounds in the head that are attended with violent inflammation of the vessels, and if not speedily arrested, may in a few days end in mortification. Wounds in this state require speedy application of the most powerful medicines. (See Section XXVI. on Wounds.) In curing this disease the following method must be attended to. First reduce the system by copious bleeding, and repeat it daily if required; by which the great efflux of blood upon the temporal arteries will be lessened and much retarded. The following drink may be given.

#### THE DRINK.

Take Glauber's Salts	..	..	..	1 pound.
Emetic Tartar	..	..	..	1 drachm.
Digitalis, in powder	..	..	..	1 "
Camphor	..	..	..	2 "

Mix, and pour over it three pints of boiling water. When lukewarm, add tincture of opium half an ounce, and give the drink. This drink will in general operate briskly in the space of twenty hours; if not, let one half of the drink be given night and morning until the desired effect be obtained. This medicine will be

found a very powerful purge, and will be the means of soon removing the cause of the complaint. After the intestines have been sufficiently evacuated by the above drink, give the following powders as long as any inflammatory symptoms remain.

#### THE POWDERS.

Take Antimonial Powder	..	..	..	2 drachms.
Nitre, in powder	..	..	...	1 ounce.
Camphor, in powder	..	..	..	2 drachms.
Tincture of Opium	..	..		2 "

Mix, and give it in a pint of warm gruel; repeat it every morning and evening until the fever abates; afterwards once a-day will be sufficient. In some stages of this disease an inflammatory swelling appears upon different parts of the jaws and head. In this case there is great difficulty in swallowing; and as the inflammation increases the jaws become generally closed so as not to be opened without an instrument. Inflammations and contractions require the most powerful medicines. The following will be found serviceable for the purpose.

#### THE MIXTURE.

Take Soft Soap	..	..	..	6 ounces.
Spirit of Sal-ammoniac	..	..		4 "
Wine	..	..	..	8 "
Tincture of Opium	..	..		4 "
Spirit of Camphor	..	..	..	4 "

Mix the whole together in a bottle for use.

This is termed the locked-jaw. The proper treatment of this malady is stated in SECTION XIX.

This liniment will be found a powerful medicine in all spasmodic diseases of this kind. The parts affected must be well rubbed with it every night and morning, or more frequently if required. Beasts under these afflictions can seldom of themselves take sufficient nourishment to preserve life; it will therefore be necessary to give enough of that food which is the most nutritious; such as the following:

Take an equal quantity of Linseed Powder, Oatmeal powder, and a few Eggs; make them into a stiff gruel by boiling them in a sufficient quantity of water; and when lukewarm from two to four quarts, or more if necessary, may be given to the beast three or four times a-day.

By these means the strength of the animal will be supported, and it will be better able to undergo the operation of medicine. This is one of the severest diseases to which horned cattle are liable; and after the symptoms disappear, it leaves them in a low debilitated state. The following restorative will be found useful to such cattle as have been reduced by the disease.

#### THE RESTORATIVE.

Take Nitre, in powder	..	..	..	1 ounce.
Sulphur	..	..	..	1 "
Sulphate of Iron	..	..	..	$\frac{1}{2}$ "
Ginger, in powder	..	..	..	1 "
Cummin Seed Powder	..	..	..	2 "

Mix, and give it in a quart of warm ale. This drink may be repeated every second or third day for three or four times, or more if necessary.

### SECTION V.

#### MURRAIN, OR THE PESTILENTIAL FEVER.

THIS disease, it has frequently been remarked, was very destructive among horned cattle from the year 1744 to 1770. And I may remark, that few years pass away without its appearance in some part of this kingdom, and with different degrees of virulence. I have every reason to believe that this distemper is contagious. If the infected animals were timely separated from the healthy ones, the further progress of the infection would no doubt

be prevented. This disease is of a putrid kind: the first symptoms are, a shivering and trembling of the limbs, a decrease of appetite; the head and neck protruding; a difficulty of swallowing; the eyes dull and languid, and a continual scouring. In a few days the breath and the dung of the diseased beast become fetid and very offensive, and affect the air for some distance; the head, horns, and breath are very hot; the body and limbs cold; the mouth affected with blisters. This disease is one of the most violent that can befall neat cattle. From the violence of the fever inflammation quickly takes place in the stomach and intestines. It may be discovered by the appearance of a morbid tumour, either across the loins, or some other part of the body; and if the hand be pressed upon the swelling, it makes a crackling noise, similar to that of a bladder when dry and full of air. In this stage of the disease mortification generally takes place, and leaves but little hope of recovery. Every means, however, should be used to stop the progress of so destructive a malady. The more favourable symptoms are as follows: The fever is retarded in its progress; the tumour gradually fills and forms good pus, and is discharged in a proper manner. As soon as possible after the disease is discovered, let the following purging drink be given.

PURGING DRINK.

Take Glauber's Salts	..	..	..	1 pound.
Emetic Tartar	..	..	..	1 drachm.
Camphor	..	..	..	3 "
Ginger	..	..	..	1 ounce.

Mix, and give it in a quart of gruel. This drink will generally operate briskly in twenty hours; if not, let one half of the above be given every night and morning until the desired effect be produced. It sometimes happens, after giving the above drink, that the animal throws it back again, which is chiefly owing to excessive acidity of the stomach, arising from a load of indigested food: when this is the case give the following purging drink.



## THE DRINK.

Take Barbadoes Aloes .. .. 1 to 1½ ounce.  
 (according to the size and strength of  
 the beast.)  
 Roche Alum .. .. 1½ "  
 Ginger, in powder .. .. 1 "  
 Mix, and give it in a quart of warm gruel.

This drink will correct the acidity of the stomach and for the most part produce the desired effect; if not, it must be repeated until the obstruction in the stomach and bowels is removed. If the fever is not checked after the stomach, and intestines are sufficiently evacuated, let two quarts of blood be taken from the beast, or more if its strength will admit of it: then give the following powders.

## THE POWDERS.

Take Atimonia Powder .. .. 2 drachms.  
 Nitre, in powder .. .. 1 ounce.  
 Camphor, in powder .. .. 3 drachms.  
 Tincture of Opium .. .. 2 "  
 Mix for one dose.

These powders must be given in a pint of warm gruel, and repeated every morning and evening until the fever is abated: afterwards once a-day will be sufficient. Should the disease continue after the above treatment, recourse must be immediately had to the following mixture.

## THE MIXTURE.

Take Iodine .. .. ½ drachm. } mix in a glass or  
 Spirit of Wine .. .. ½ ounce. } marble mortar.  
 Then add Water .. .. 1 pint.  
 Lastly, Pure Sulphuric Acid .. 2 drachms (by measure.)

Give the whole immediately, on an empty stomach, and repeat it every morning and evening for a week if required. During that time, should the beast be affected with palpitations, convulsions, tremours, defective vision, &c., leave off the mixture, and give

her one pound of Glauber's salts, one ounce of nitre, digitalis one drachm; and let plenty of milk and linseed be administered to her. As this disease proceeds to a crisis, the most difficult time is from the sixth to the ninth day. If the animal survives beyond the latter it will in general recover, though it will be left in a low debilitated state; for which give the following restorative drink.

#### THE DRINK.

Take Gentian Root, in powder	..	..	1 ounce.
Sulphate of Iron	..	..	3 drachms.
Nitre	..	..	1 ounce.
Sulphur	..	..	1 "
Ginger, in powder	..	..	1 "
Cummin Seed, in powder	..	..	1 "

Mix, and give it in a quart of warm ale or beer, and repeat it every third day for two or three times. As soon as any swelling appears in any part of the body, let the following mixture be well rubbed in over the part affected.

#### THE MIXTURE.

Take Nitre in powder	..	..	4 ounces.
Vinegar	..	..	1 quart.
(dissolve the nitre in the vinegar)			
Then add Oil of Vitriol	..	..	1 ounce.
Tincture of Opium	..	..	2 "
Camphorated Spirit of Wine	..	..	4 ounces.
Mix, and put it in a bottle for use.			

The parts affected must be well rubbed two or three times a-day with the mixture. It will be a powerful medicine in retarding the black mortifying tumour. When the inflammatory tumours terminate in a mortification, the approach will be known by the following symptoms. The inflammation loses its redness, and assumes a dusky or livid colour, the tension of the skin goes off, and it feels flabby; the complexion of the tumour changes from a livid to a black appearance; the pulse

is quick and low, accompanied with cold and clammy sweats. When these symptoms appear there can be but little hope of recovery.

The more favourable symptoms are when the tumefied parts are gradually proceeding to a state of suppuration. In this case the following mixture must be applied on the parts two or three times a-day instead of the restraining mixture.

#### THE MIXTURE.

Take Linseed Oil	..	..	..	8 ounces.
Oil of Turpentine	..	..	..	3 "
Soap Liniment	..	..	..	2 "
Tincture of Opium	..	..	..	2 "

Mix for use.

As soon as matter is sufficiently formed it may be let out with a lancet or knife, and afterwards dressed with digestive medicines. The animals suffering under this complaint are in general affected with a sore mouth, full of blisters and much inflamed. The following mixture will be suitable for it.

#### THE MIXTURE.

Take Alum, in fine powder	..	..	..	2 ounces.
Salt of Prunella	..	..	..	1 "
Bole-armenian	..	..	..	1 "
Honey	..	..	..	3 "
Wine Vinegar	...	..	..	1 quart.

Mix for use.

Let the mouth be well washed with the mixture two or three times a-day in the following manner:—Take a stick or cane about two feet long, to which attach a piece of linen or fine tow, and dip it in the mixture, which must be previously well shaken, and apply it all over the mouth. Cattle suffering under this severe disease are seldom able of themselves to take a sufficient quantity of nourishment; therefore let them always have plenty of gruel thrown down to them three or four times a-day; and as soon as

they will eat give them a mash of scalded bran or malt, with a little ground corn in it. Proper care and good nursing will in time bring them about.

## SECTION VI.

### BLACKLEG, QUARTER-EVIL, OR BLACK-QUARTER.

THE symptoms of this disorder are in many respects similar to those of the Pestilential Fever, as described in Section v. It is, however, necessary to discuss this malady in a separate section, as it is not an epidemic, nor infectious, but is almost wholly confined to young cattle from one to two years old.

The Quarter-Evil chiefly affects beasts that are in good condition. Milch cows and lean cattle are seldom seized with this disease, and during the winter it is not known: the summer season is the time when it makes its appearance, and it often proves destructive to a large number of young cattle. When the vegetable creation springs up in great perfection, young animals are not able to stand such luxurious living. The disease proceeds from a redundance or overflow of blood, and frequently causes them to die suddenly in a state of putrefaction.

The symptoms are a sudden depression of the animal frame, as if seized with the palsy. A swelling takes place immediately in some part of the body, as on the legs, shoulders, under the belly, or some part of the back: when it appears on this last part towards the loins, it will be attended with much danger. It may be discovered by the crackling noise made by the swelling, when the hand is pressed upon it, owing to the collection of a quantity of air between the skin and flesh. The mouth and tongue will be full of blisters, from the severity of the fever. As soon as this disease makes its appearance upon a young animal, take from it two or three quarts of blood, according to its size and age.

Two hours after bleeding give the following drink, which will be found of proper strength for young cattle from one to two years old.

#### THE DRINK.

Take Glauber's Salts from eight to twelve ounces, according to strength and size ; Antimonial Powder one drachm ; Camphor, rubbed to powder, with a few drops of Spirit of Wine, one drachm ; fresh powdered Fox-glove (*digitalis*) one scruple ; Ginger, in powder, two drachms.

Put the ingredients into a pitcher, and pour upon them one quart of boiling water. Cover the vessel, and let the mixture stand until lukewarm, and then give it. If the animal be more than two years old, the salts may be increased in proportion till the quantity amounts to one pound. This will be found a powerful drink for removing inflammatory symptoms, which attend diseases of this kind, as well as to evacuate the stomach and intestines : but if this should fail of purging the beast in the space of twenty hours, it must be repeated by giving one half of the drink every night and morning, until the desired effect be produced, since without this there can be but little hope of recovery. When this is accomplished, the following drink may be given once a-day, or every other day, as may be thought necessary.

#### THE DRINK.

Take Alumen Powder	..	..	..	2 ounces.
Nitre, in powder	..	..	..	1 "
Gentian, in powder	..	..	..	1 "
Caraway Seed, in powder	..	..	..	1 "
Pure Sulphuric Acid	..	..	..	2 drachms.

Put this drink into a pitcher, and pour over it a quart of boiling water. Cover it down until lukewarm ; then add half a pint of wine vinegar, and give it immediately. If the fever (attended with considerable inflammation in the parts affected) still continues to increase, it will be proper to omit the above drink, and give the following powders.

## THE POWDERS.

Take Antimonial Powder	..	..	..	2 drachms.
Nitre, in powder	..	..	..	1 ounce.
Camphor, in powder	..	..	..	2 drachms.
Tincture of Opium	..	..	..	2 “
Powdered Digitalis (Fox-glove)	..	..	..	1 scruple.

Mix, and give it in a pint of warm gruel. Repeat it every morning and evening until the fever begins to subside; afterwards once a-day will be sufficient. As soon as the unfavourable symptoms disappear the above drink may be renewed. All the tumefied parts must be well rubbed with the following mixture. But if the tumour gradually proceeds to suppurate, it will be proper to encourage it with the following blistering oils.

## THE BLISTERING OILS.

Take Nitre, in powder	..	..	..	2 ounces.
Vinegar	..	..	..	1 quart.
(dissolve the nitre in the vinegar.)				
Then add Oil of Vitriol	..	..	..	10 fluid drachms.
Tincture of Opium	..	..	..	2 ounces.
Camphorated Spirit of Wine	..	..	..	4 “

Mix the whole together in a bottle for use, and rub the parts well with it two or three times a-day.

## THE BLISTERING OILS.

Take Gum Euphorbium three drachms, rubbed to a paste with a little Turpentine; then add Sublimate one and a half drachm, previously dissolved in one drachm of Muriatic Acid; then add Cantharides, in powder, three drachms; Oil of Turpentine one ounce; Oil of Origanum two drachms; Rape Oil six ounces.

Mix the whole together, and rub a sufficient quantity on the tumorous part, in the same manner as using blistering ointment, and repeat it every other morning until matter or pus is formed; then open it with a lancet, so that the matter may be discharged,

and the part dressed in the same manner as wounds of the like nature. Should the disease make its appearance with violent symptoms, I should recommend the blistering oils to be well rubbed on the legs every second or third morning for two or three times, which will be the means of bringing the virulent matter out of the system and prevent mortification. I will here make a few observations respecting the prevention of this malady in those districts in which it appears. Every possible attention should be paid to prevent so destructive a disease among young cattle; for if they are once attacked their cure may be doubtful: such as thrive most are in general first attacked, and are in the greatest danger. As soon as this disease makes its appearance upon any one of the herd, while in the pasture, let them all be brought out in the evening into a fold-yard, and from two to three quarts of blood may be taken from each, according to its size, condition, and strength. Let them remain there till next morning, and then give to each beast the following drink.

#### THE DRINK.

Take Crude Antimony, in powder .. ..	1 ounce.
Nitre, in powder .. ..	1 "
Flower of Sulphur .. ..	2 "
Gum Myrrh, in powder .. ..	$\frac{1}{2}$ "

Mix for one drink.

Let this be given in the morning fasting, in a quart of warm ale; in two hours afterwards the beast may be turned into the pasture. A few of these drinks, with bleeding, if repeated every third morning, will in general be sufficient to protect them against a future approach of this disease. By adhering to the general treatment of the various stages of this disease, it may not only be cured, but also prevented.

## SECTION VII.

## RED WATER AND BLACK WATER.

THIS disease is prevalent among neat cattle of every description, but more among milch cows than any other beasts. The Red Water and Black Water seldom occur separately; the former, I believe, from experience, to be the original disease, and the latter to be occasioned by the retention of part of the blood about the orifice of the leaky vessel; which coagulates, and in a short time putrefies, changing to a black colour. This is partly washed away, every time the beast stales, and constitutes what is termed black water.

The origin of this disease is ascribed by various authors to different causes; for instance, the taking cold when turned into low pasture grounds at the spring of the year; others attribute it to the change of pasture, or a scarcity of water in a long dry season; some to the change of the atmosphere, and from eating saffron. Most of these cases occasion bloody urine.

If the Red Water proceeds from external injury, such as a violent strain across the loins, in consequence of another beast romping on them, or from a severe blow on that part, producing inflammation of the kidneys and adjacent parts, the treatment must be as follows. First, bleed according to the age, strength, and size of the animal, from three to four quarts; about two or three hours afterwards give the following drink.

## THE DRINK.

Take Nitre, in powder	..	..	..	2 ounces.
Resin, in powder	..	..	..	1 "
Carbonate of Iron	..	..	..	1 "
Alum, in powder	..	..	..	1½ "
Epsom Salts	..	..	..	2 "

Mix, and pour a quart of warm ale over the ingredients; then add spirit of turpentine one ounce, and give it lukewarm. This drink may be repeated the following day if required, adding to it one drachm of powdered foxglove.



The preceding drink seldom fails to turn the water after the first drench; but in some cases the disease is attended with active inflammation, and it will be necessary then to give the following drink, which will remove the disease, and prevent a severe constipation of the bowels, which so frequently endangers the animal's life.

#### THE DRINK.

Take Barbadoes Aloes	..	..	3 drachms.
Epsom or Glauber's Salts	..		12 ounces.
Nitre, in powder	..	..	1½ "
Ginger, in powder	..	..	1 "

Mix. Pour over it three pints of boiling water, and give it lukewarm. This medicine will in general open the bowels in twenty hours; if not, let one-half of the above be given night and morning until the desired effect is produced. The inflammation takes place upon the glands about the neck of the bladder; hence the small blood-vessels become ruptured, and the blood coagulates and lodges in the cavity about the neck of the bladder, and produces the two different kinds of disease above mentioned. When the change takes place from red to black water, the animal generally stales free from either for several times; and in slight cases, where blood is passed away with the urine, the beast does not seem to be affected by it: if a cow, she holds to her quantity of milk and seems no worse. But when the blood so passed away is considerable, and continues long, the quantity of milk is lessened, and the animal reduced to a low state; and if some powerful remedy be not administered, the beast must inevitably sink under the disease. But I hope no person would be so neglectful as not to apply proper remedies in time. Bleeding is seldom if ever necessary, as there is no more blood than is required. The following will be found to give immediate relief.

## MIXTURE—NO. I.

Take Epsom or Glauber's Salts	12 to	..	16 ounces.
Barbadoes Aloes	..	3 to	.. 4 drachms.
Nitre, in powder	..	..	.. 1 ounce.
Carbonate of Iron	..	..	.. 1 "
Alum, in powder	..	..	.. 1 "
Ginger, in powder	..	..	.. 1 "

Mix, and pour over it three pints of boiling water. Cover it down, and when lukewarm add one ounce of spirit of turpentine, and give it to the beast; repeat it if required.

## NO. II.

Take Glauber's Salts	..	..	..	1 pound.
Nitre, in powder	..	..	..	1 ounce.
Ginger, in powder	..	..	..	2 "
Treacle	..	..	..	4 "

Mix, and pour over it three pints of boiling water. Cover it down, and when lukewarm add spirits of turpentine one ounce, and give it to the beast: repeat it if required.

Either of the above drinks is an excellent remedy for this disorder; more than one dose is seldom required unless the bowels are very costive. But I have found, from experience, that beasts in the counties of Hereford, Monmouth, and Worcester, are not so generally subject to costiveness as they are in the principality of Wales. This may be attributed to the difference of pasturage, and situation of the country generally. The animals should be kept two hours from food before and after the drinks are administered. They seldom require any particular kind of diet, as they are rarely off their food, except they are attacked with fever, which, as well as the disease, either of the above drinks will remove. In the Red or Black Water, when it proceeds from external injury, and after it has been removed, it sometimes makes its appearance every month or six weeks, by a discolouration of the urine, which is caused by a

weakness of the small vessels in the parts. The following medicine will strengthen and brace the relaxed vessels.

THE MIXTURE.

Take Oil of Vitriol .. .. .	$\frac{1}{2}$ ounce.
Tincture of opium .. .. .	$\frac{1}{2}$ "

Mix, and give it in two quarts of gruel, and repeat it once a-day if found necessary, until a cure is performed.

The greatest danger in this disease is costiveness: to obviate this, let the medicines be given as I have ordered, which will be found amply sufficient to relieve the water and intestines; but should any obstinate case occur, let it be treated as follows, and the obstruction of the bowels will be removed in less than twenty-four hours. Let a small furnace of water be heated; then let two persons foment the bowels with it for an hour or two at a time; but previously give the following clyster and mixture.

THE CLYSTER.

Take Epsom Salts .. .. .	4 ounces.
Jalap, in powder .. .. .	2 drachms.
Fine Powdered Ginger .. .. .	1 "
Mutton Broth .. .. .	2 quarts.

Let the above ingredients be dissolved in the broth, and before administering it let a small hand be passed up the fundament to remove the hard dung. This may be repeated morning and night if required.

THE MIXTURE.

Take Castor Oil .. .. .	1 pound.	} mix well, then the Castor Oil, &c.
Croton Oil .. .. .	20 to 30 drops.	
Spirit of Wine .. .. .	$\frac{1}{2}$ ounce.	
Barbadoes Aloes .. .. .	3 drachms.	
Nitre, in powder .. .. .	1 ounce.	

Let Gruel be administered occasionally.

Great care should be taken to have the croton oil well mixed with the castor oil. It will be necessary, when the bowels are properly opened, to give the following once a-day for three or four times in a quart of gruel.

THE MIXTURE.

Take Nitre, in powder	..	..	..	1 ounce.
Antimonial Powder	..	..	..	1 drachm.
Caraway Seeds, powdered	..	..	..	2 ounces.
Mix for one dose.				

SECTION VIII.

DIARRHŒA, OR ROTTENNESS.

THIS disease makes its appearance sometimes by copious stools of a slimy, bilious, and black nature, and at other times of a frothy, greasy, and clay-like nature, and very offensive. It may be caused by various circumstances: the most frequent are acid or putrescent aliment; acrid bile; pus, secreted from abscesses, and carried to the intestines; obstructed perspiration; putrid vapours; and the translation of morbid matter of other diseases to the intestines, which quickly reduces the animal to a weak and debilitated state, attended with loss of appetite; and if not speedily removed, the foundation of an incurable disease will be laid. This disease is supposed, by most authors, to be produced by the north and north-easterly winds at the spring of the year. Such winds greatly affect cattle that have been penned during the winter.

Cattle are most affected with Diarrhœa during the months of April and May; especially if the season be wet and cold. The relaxed powers of animal nature are not able to perform the office of digestion; thus a large quantity of acid is formed in the stomach, and conveyed thence through the intestines, which pro-

duces slimy and bilious stools. Here nature, by her own effort, endeavours to check its progress, by an effusion of the saponaceous juice of the bile, which is there for the purpose of correcting acidity and forwarding digestion, but in many instances it fails.

Cows after calving are liable to take cold when exposed in damp situations in severe weather, which frequently causes this disease. The following are unfavourable symptoms:—the animal loses her appetite, the dew-lap hangs down and has a flabby appearance, the dung runs off with a putrid and offensive smell, and as it falls on the ground rises up in bubbles; the hair of her body appears starting. When these symptoms appear there is little hope of a speedy recovery. The animals thus affected should be taken from the grass and kept in a large cow-house or open yard, where they can be sheltered from the weather; they should be fed with dry meat, such as good hay, ground barley, oats and beans. Take an equal quantity of any one of these three articles, and add an equal portion of linseed-cake. A moderate quantity should be given two or three times a-day; if the appetite should be gone, a stiff gruel may be made of the same and given to the beast three or four times a-day. A sufficient quantity of this nutriment will enable the animal to undergo the operation of medicine. The cure of this disease should be first attempted by evacuating the bowels of the slimy and bilious excrements that corrode and destroy their mucous lining. For this purpose let the following be given.

#### THE MIXTURE.

Take Barbadoes Aloes .. ..	4 to 6 drachms.
Epsom Salts .. ..	4 to 6 ounces.
Ipecacuanha, in powder .. ..	1 drachm.
Ginger, in powder .. ..	1 ounce.

Mix. Pour a quart of gruel over it, and give it when lukewarm, 'This will remove and carry off the obstructions that cause this disease. In thirty hours, or when the physic has done operating, the following drink must be administered.

## THE DRINK.

Take Dover's Powder	..	..	..	1 ounce.
Gentian Powder	..	..	..	1 "
Turmeric Powder	..	..	..	4 "
Mix for one dose.				

Let this drink be given in a quart of warm ale, and repeated every other day for four or six times if required. After frequent trials I have found this to produce the desired effect; but should it fail to cure the disease, it will be necessary to have recourse to other means.

## THE MIXTURE.

Take Prepared Chalk	..	..	..	4 ounces.
Prepared Oyster-shells	..	..	..	4 "
Gum Kino	..	..	..	1 "
Ginger, in powder	..	..	..	1 "
Alum, in powder	..	..	..	2 "
Tincture of Opium	..	..	..	6 drachms.

Mix, and give it in a quart of warm ale, and repeat it every other day; or the following:

Take Gum Kino	..	..	..	..	$\frac{1}{2}$ ounce.
Pomegranate, in powder	..	..	..	..	4 "
Oak Bark, in powder	..	..	..	..	2 "
Tincture of Opium	..	..	..	..	$\frac{1}{2}$ "
Mix for one drink.					

Boil the pomegranate in three pints of water, and when luke-warm add the other ingredients and give it. This is an excellent drink to brace and restore the relaxed powers of the animal; and likewise to carry off the remains of the disease. It will be proper to repeat the drink every other day for two or three times, or more.

(BLACK WATER CONTINUED.)—OR THE FOLLOWING DRINKS.

THE DRINK.

Take Epsom or Glauber's Salts	..	..	1 pound.
Gum Opium	..	..	1 drachm.

Pour a quart of boiling water over the ingredients, and give it lukewarm.

THE DRINK.

Take Calcined Sulphate of Iron	..	..	2 ounces.
Ginger	..	..	1 "
Pomegranate, in powder	..	..	4 "
Alum, in powder	..	..	2 "
Prepared Chalk	..	..	4 "

Mix, and give it in a quart of warm ale.

## SECTION IX.

### INFLAMMATION OF THE LIVER.

THIS disease frequently attacks horned cattle; it does not appear to be confined to any particular part of the liver, but affects either the concave or convex sides: sometimes the membranes only are affected. The treatment in each case is the same. The liver is a glandular substance, and the largest in the animal body: its chief use is to secrete the bile. Inflammation of the liver proceeds from external and internal causes; but mostly from the latter. Fat beasts, or such as are in good condition, are the most liable to this disease, particularly in hot weather, when overheated by driving, or from gadding or running about in the pasture on very hot days; drinking cold water, or being exposed to sudden cold when in the above-mentioned

state. Inflammations occasioned by external causes chiefly proceed from the goring of cattle with their horns ; or from some blow or bruise received by other means.

The symptoms are as follow :—a severe pain and swelling about the short ribs on the right side, attended with difficulty of breathing, great thirst, loathing of food, with a yellowness extending over the body, and on the white of the eyes ; a palpitation of the heart, attended with a strong fever. If it suppurates and discharges itself into the abdomen, the disease then becomes critical and dangerous. Bleeding is necessary at the commencement of the disease. Relief is generally obtained in the first instance from purgative medicines, and then from those medicines which act chiefly on the liver.

#### THE PURGATIVE DRINK.

Take Epsom or Glauber's Salts	..	..	1 pound.
Nitre, in powder	..	..	1 ounce.
Salt of Tartar	..	..	1 "
Ginger	..	..	1 "

Mix, and pour over it three pints of boiling water, and give it lukewarm. This drink will be found sufficiently strong for a full-grown beast ; but if it does not operate in the space of twenty-four hours, it will be proper to increase the strength of it by adding two or three drachms of Barbadoes aloes to the next drink, and give one half of it every night or morning until a sufficient passage through the intestines is obtained : for if this be not properly attended to, the disease will rapidly increase and endanger the life of the animal. In all obstinate cases of this disease clystering must be resorted to. If the inflammation and fever continue after the bowels have been sufficiently evacuated, it will be proper to repeat the bleeding, to the quantity of two quarts or more ; and if needful it may be repeated every other day, as long as the inflammation continues. Violent purgative medicines should be avoided, yet it will always be requisite to keep the body sufficiently open ; after which give the following drink.



## THE DRINK.

Take Nitre, in powder	..	..	..	2 ounces.
Castile Soap, sliced	..	..	..	1 “
Emetic Tartar	..	..	..	1 drachm.
Ginger	..	..	..	1 ounce.
Cummin Seed, powder	..	..	..	2 “

Mix for one drink, and give it in a quart of warm gruel.

It will be proper to repeat this drink once a-day for several days together, or as long as any symptoms of the disease appear. If, after these endeavours, the fever still continues, give the powders as follows.

## THE POWDERS.

Take Antimonial Powder	..	..	..	2 drachms.
Nitre, in powder	..	..	..	1 ounce.
Camphor	..	..	..	2 drachms.
Pulvis Opiv	..	..	..	1 scruple.

- Mix for one dose.

These powders may be given in a pint of warm gruel, and be repeated every morning and evening until the fever abates ; then once a-day will be sufficient. Afterwards, to restore the animal to its former condition, give the following drink.

## THE DRINK.

Take Gentian Root, in powder	..	..	..	1 ounce.
Sulphate of Iron	..	..	..	3 drachms.
Nitre, in powder	..	..	..	1 ounce.
Ginger in powder	..	..	..	$\frac{1}{2}$ “
Anise Seed, in powder	..	..	..	2 ounces.

Mix for one dose, and give it in a pint or quart of warm ale : repeat it every third or fourth day as long as necessary. The diet should be made of scalded bran, ground linseed cake, or stiff gruel. By strict attention to this method, the cure, however obstinate the disease, may be effected.

## SECTION X.

## INFLAMMATION OF THE KIDNEYS.

THIS disease frequently occurs among horned cattle, and is often attended with great danger. Small as the organs of the kidneys are, they are essential to life, and cannot be dispensed with. The quantity of blood that passes through them is great; and whatever obstructs the extremities of the arteries, and prevents them from transmitting the fluid to its proper destination, will bring on this disease.

Inflammation of the kidneys frequently proceeds from drawing very heavy weights, severe falls or blows across the loins; at other times from small stones or gravel being lodged within the kidneys; from hard driving in hot weather, or other circumstances that drive the blood too forcibly into the kidneys.

The symptoms are great heat, attended with considerable pain in the region of the kidneys or across the loins, and in general extending from the urethra to the bladder; this is very perceptible to the hand when applied to the part; and if pressed, the animal will instantly give way. The urine is of a high colour, occasionally nearly red; it is often discharged in small quantities, with considerable pain and difficulty; cold sweats, shivering; the ears, horns, and feet, are mostly cold. The sudden cessation of the nephritic pains, and the urine dribbling away in small quantities, of a black offensive colour, are signs of approaching mortification.

Such symptoms as the following are favourable and indicate a termination of this disease, viz. if the urine becomes high, or approaching the colour of a strong infusion of black tea or coffee: if it is secreted in a much larger quantity than before, and at last is thick, copious, and mixed with mucus, a safe and speedy cure may be relied on. Bleeding is necessary in the

commencement of this disease, in proportion to the size, condition, and strength of the beast; from three to four quarts may be taken the first time. In two hours afterwards give the following purging drink.

THE DRINK.

Take Glauber's Salts	..	..	..	1 pound.
Emetic Tartar	..	..	..	1 drachm.
Digitalis, in powder	..	..	..	2 scruples.
Gum Camphor	..	..	..	2 drachms.

Mix for one drink.

Pour over it three pints of boiling water, and give it when lukewarm. This drink will in general operate in twenty or twenty-four hours; if not, let one half of the drink be given every night and morning until the desired effect is produced. This drink will be found very powerful in evacuating the intestines and removing all obstructions of the kidneys, by which means the inflammation will be checked. Afterwards give the following

DRINK.

Take Castile Soap	..	..	..	1 ounce.
Salt of Tartar	..	..	..	$\frac{1}{2}$ "
Balsam of Copaiva	..	..	..	1 ounce.
Oil of Turpentine	..	..	..	4 "
Tincture of Opium	..	..	..	$\frac{1}{2}$ ounce.
Camphor	..	..	..	3 drachms.

Dissolve the camphor in the turpentine, the balsam of copaiva mix with the salt of tartar; the soap may be dissolved in a quart of gruel, and when lukewarm give it to the beast. This drink may be repeated every day, or every other day. Should the inflammation continue, it will be proper to repeat the bleeding. As soon as it is abated, the following should be administered.

Take Nitre, in powder	..	..	..	2 ounces.
Camphor	..	..	..	3 drachms.
Tincture of Opium	..	..	..	$\frac{1}{2}$ ounce.

Mix for one drink.

Let the foregoing be put into a pitcher, and a quart of hot gruel poured on it : cover it down until lukewarm, and give it to the beast. This drink should be repeated once a-day if required.

Costiveness generally attends this disease, and has a tendency to increase it ; whenever it occurs it may be removed by the application of the following clyster.

#### THE CLYSTER.

Take Linseed	..	..	..	..	6 ounces.
(boil it in two quarts of water, and strain it while hot.)					
Then add Glauber's Salts	..	..	..	4	"
Treacle	..	..	..	4	"

When lukewarm inject it up the rectum, and repeat it as occasion may require. If there should be any external heat across the loins, let it be fomented with hot water and a little vinegar.

## SECTION XI.

### INFLAMMATION OF THE STOMACH.

INFLAMMATION of the Stomach proceeds from different causes. Neat cattle in general appear to have no measure to their appetite when admitted into fresh pasture ; they are apt to charge their stomach, by which the powers of digestion are impaired ; they neglect to lie down, to ruminate or chew the cud ; for want of which it undergoes a severe process of fermentation. This obstructs circulation, and is the chief cause of producing inflammation in this part ; it likewise proceeds from the animal's drinking too freely of cold water when overheated, the perspiration being thus suddenly obstructed. In some instances it is caused by the acrimony of the bile, or from some adjacent part that may be inflamed. At other times it proceeds from taking into the stomach acrid or stimulating corrosive poison.

This is a very acute disease, and requires the most powerful means that can be employed for relief, otherwise it may prove fatal. The following are the symptoms of this disease:—a pain in the stomach, attended with a burning heat; the breath at times of so hot a nature as to raise large blisters inside the mouth; the animal is restless, and every thing that is taken into the stomach appears to increase the pain, and the stomach resists it with violence, and it frequently brings on a painful cough: the extremities are mostly cold, and the body is covered with a cold sweat; a palpitation of the heart, attended with difficulty of breathing.

These are the symptoms that accompany inflammation of the stomach. First, bleed plentifully, according to size and strength. Should the disease prove obstinate, it will be proper to repeat the bleeding in small quantities, every two or three days, until the inflammation subsides. The mashes and water that are given to the beast should not be more than lukewarm.

The medical treatment must first be, to unload the stomach of its undigested food, by giving mild purgative medicines. Unless the stomach and intestines are first evacuated, there can be but little hope of recovery. The following will be found adapted for this purpose.

#### THE MIXTURE.

Take Castor Oil	..	..	..	..	1 pint.
Salt of Tartar	..	..	..	..	1 ounce.

Mix, and give it in three pints of warm gruel as soon as possible.

If this does not operate in twelve or twenty hours, so as to work a sufficient passage through the bowels, it will be necessary to repeat it, by giving one half of the above drink night and morning, or one half of the following until the desired effect is produced.

Take Glauber's Salts	..	..	..	..	1 pound.
Emetic Tartar	..	..	..	..	1 drachm.
Gum Camphor	..	..	..	..	2 "

Mix, and give one half of it in gruel every night and morning as directed. In every stage of this disease nothing tends to give relief more than keeping the bowels sufficiently open with gentle purgative medicines.

If the fever still continues give the following powders.

#### THE POWDERS.

Take White Antimonial Powder	..	..	2 drachms.
Nitre	..	..	1 ounce.
Camphor, in powder	..	..	2 drachms.

Mix for one dose.

These powders must be given in a pint of warm gruel, and repeated every morning and evening until the fever abates; then once a-day will be sufficient, and on the animal's recovering its strength, the following will be found very beneficial for bracing and restoring the relaxed constitution.

Take Carbonate of Iron	..	..	..	$\frac{1}{2}$ ounce.
Gentian Root, in powder	..	..	..	1 "
Nitre, in powder	..	..	..	1 "
Ginger, in powder	..	..	..	1 "

Mix for one dose.

Give it in a pint of warm ale, and repeat it every other day if required.

## SECTION XII.

### COLIC, OR GRIPES.

OXEN and Cows of every age are liable to this disease. It appears to proceed from a spasmodic contraction of some part of the intestines. Almost every pain in the abdomen comes under the appellation of colic or gripes; it will therefore be ne-

cessary to consider it under the following separate heads. The windy or flatulent colic is for the most part occasioned by the animal's overloading the stomach with dry indigestible food ; such as chaff, corn, &c. ; likewise from drinking too large a quantity of cold water when overheated. In the summer season it generally occurs in such cattle as have been put into fresh pastures, and have overloaded the stomach with succulent grass : fermentation then takes place, and a quantity of air is formed, which, if not speedily removed, will become acid, and corrode the stomach, or some part of the intestines, and end in inflammation. In this case it appears the animal's heat is not sufficient to bring into motion that mass of fluid which nature requires, and which would prevent the circulation from being impeded. The inner surface of the stomach and bowels becomes irritated by their cold or acrid qualities, which cause violent twitching pains, and produce much uneasiness : the animal frequently lies down, and rises up again and strikes its horns and hind feet against its belly. The pulse seldom appears to be much affected at first ; but if the disease continue for any length of time, the pulse is much quicker and harder than usual. This generally indicates the approach of inflammation, and is accompanied with considerable tension of the belly.

The inflammatory colic generally proceeds from the former, and if not soon relieved will end in inflammation of some part of the intestines. This disease is in general attended with costiveness : the contents of the stomach and bowels are obstructed, and in a short time become acrid and viscid ; hence the membranes that line the intestines become inflamed, and excruciating pain is the consequence. Neat cattle are also liable to another kind of colic, called by drovers, "fardel," or "fardel bound : " it proceeds from the liquid parts forcing a passage either through the hardened excrements or the side. Great danger attends cattle in this situation, as the deceitful appearances are easily mistaken for purging. When these symptoms of costiveness are discovered, no time should be lost in giving the following

## MIXTURE.

Take Barbadoes Aloes	..	..	..	4 drachms.
Epsom Salts	..	..	..	4 ounces.
Castor Oil	..	..	..	4 "
Salt of Tartar	..	..	..	1½ "
Ginger	..	..	..	1 "
Oil of Turpentine	..	..	..	1 "
Tincture of Opium	..	..	..	½ "

Should the animal breathe short and frequent, heave in the flanks, and show symptoms of fever, it indicates approaching inflammation. If this disease continues with all the aforesaid symptoms, a mortification may ensue, which will end in sudden death. This may be prevented by administering proper medicines in time; for when first attacked they seldom require more than some warm stimulating medicine, administered in time, to promote the peristaltic motion of the intestines and stomach. A solution of potash or common lie will combine with the carbonic acid in the stomach and effect a cure, if given in sufficient quantities to absorb the air.

The following is nearly the same treatment as that of a horse for the colic or gripes, which I have not known fail in a single instance when properly administered in due time.

## THE MIXTURE.

Take Tincture of Asafoetida	..	..	..	2 ounces.
Balsam of Copaiva	..	..	..	2 "
Spirit of Sweet Nitre	..	..	..	2 "
Rectified Oil of Amber	..	..	..	1½ "
Tincture of Opium	..	..	..	1 "
Spirit of Camphor	..	..	..	2 "
Spirit of Turpentine	..	..	..	2 "
Salt of Tartar	....	..	..	2 "
Peppermint Water	..	..	..	1½ pint.

Let this be prepared with genuine drugs, and one half administered immediately; the other part to be repeated if required, which however is seldom the case.



Should proper relief not be obtained in an hour or two, let from three to four quarts of blood be taken away: this will check the inflammation. About two hours afterwards give the following purging drink.

THE DRINK.

Take Barbadoes Aloes	.. ..	4 drachms.
Epsom Salts	.. ..	8 ounces.
Ginger	.. ..	1 "

Mix for one dose.

Let it be given in a quart of gruel, and one half repeated every night and morning until the desired effect is produced. The following clyster will also be found serviceable.

THE CLYSTER.

Take Linseed, bruised	.. ..	5 ounces.
Tobacco	.. ..	1 "
Common Salt	.. ..	1 handful.

Boil the two first articles in three quarts of water; strain through a linen cloth, and add the Salt; when lukewarm inject it up the anus.

The clyster injected up the rectum twice a-day will greatly assist the physic in its operation. Clysters are in most cases beneficial: they relax the parts as far as they go, by softening the fœces, and promote evacuation much sooner. Immediate ease frequently succeeds these evacuations: and the animal's appetite may in a short time be restored. A few of the restorative drinks may be given if required.

THE DRINK.

Take Gentian, in powder	.. ..	1 ounce.
Sulphate of Iron	.. ..	3 drachms.
Ginger, in powder	.. ..	1 ounce.
Nitre, in powder	.. ..	1 "

Mix for one dose.

And let it be given in a pint of warm ale or beer, and repeated if necessary.

## SECTION XIII.

## FOG SICKNESS, BLOWN, OR HOVEN.

THIS is a common complaint among neat cattle, and is attended with symptoms of the most distressing nature. It requires speedy relief, or a rupture of the stomach or some part of the intestines may be expected to take place; which often terminates fatally. Fog sickness generally proceeds from a voracious disposition, incident to neat cattle, when permitted to satiate their appetite with food of which they are most fond; such as clover, vetches, or different kinds of grass, &c.

Beasts are most subject to be hoven or blown in summer; and in the winter to be choked. It is possible they may be seized with the former and escape the latter. This complaint is occasioned by the animals' feeding for a considerable time upon rich succulent food, so that the stomach becomes overcharged, and from their greediness to eat, they forget to lie down to ruminate or chew the cud. Thus the paunch, or first stomach, is incapable of expelling its contents; fermentation takes place in the stomach, by which a large quantity of confined air is formed in the part that extends nearly to the anus, and for want of vent at that part causes the animal to swell to a state of suffocation, and a rupture of some part of the stomach or intestines ensues. As sudden death in many instances is the consequence of this, the greatest caution is requisite in turning cattle into fresh pastures. They should not be suffered to remain long in such pastures before they are removed into a fold-yard, or some place where there is but little to eat, in order that the digestive organs may have time to discharge their functions. If this be attended to a few times, it will take away the greediness of disposition, and prevent this distressing complaint. Various expedients are employed for the purpose of affording relief with medicine and manual operation. It will be found a good

practice to give such beasts as are of that disposition a cordial restorative drink about an hour before they are turned into a fresh pasture. This I believe has had the desired effect, for I have not known of one instance of its failing. As soon as the beast is discovered to be either hoven or blown, by eating too great a quantity of succulent grass, let the following purging drink be administered.

THE PURGING DRINK.

Take Glauber's Salts	...	..	..	1 pound.
Ginger, in powder	..	..		2 ounces.
Emetic Tartar	..		..	1 drachm.

Put all the ingredients into a pitcher, and pour three pints of boiling water upon them; when lukewarm give the dose.

In most cases this drink will be found sufficient to purge a full-grown beast of this kind. If it should fail in sixteen or twenty hours, one-half can be repeated every night and morning until the desired effect is produced. To each part add one ounce of turpentine, and half an ounce of tincture of opium, and give it until the symptoms are abated, or a passage forced through the intestines. When medicine fails to have a speedy effect, recourse must be had to external means, such as the contrivance of Dr. Monro, first communicated to the public in the year 1793: it consists of an iron wire formed into a tube, and covered with soft smooth leather. The instrument may be had in most respectable towns. It would be well if one was kept in every town. The distance from the fore-teeth to the first stomach in an ox is about six feet. The instrument, therefore, should be full that length, or rather longer, and should be gently passed down the beast's throat into the first stomach; whence a large quantity of fluid will be discharged. It may remain there for a short time, as it does not impede respiration.

There is another kind of instrument recommended by Mr. Eager, which appears to be equally as useful as that of Dr. Monro. Mr. Eager's contrivance is of two sizes; the one adapted

for sheep, and the other for cattle; for which the London Society of Arts, in 1796, voted him a premium of fifty guineas a year. These instruments are constructed as follows:—that for cattle is six feet long, with a round knob of wood, properly secured to one end of the cane. A man is ordered to lay hold of the horns with one hand, while he pushes the cane down with the other. As soon as it enters the stomach a large quantity of fetid air will be disengaged, which will easily be discerned by the sinking of the animal's body to its former state again; the beast will thus be very soon restored to health. If neither of these instruments is at hand, the following may be used: Take a knob of wood, turned in the form of an egg, with a hole bored through the centre and out at each end. Then take a common cart whip, two yards long, and secure one end fast in the knob, dip it in oil or grease, and introduce it in the same manner as the former.

Punching is another method frequently resorted to in dangerous cases. The operation is performed in the following manner. Take a sharp penknife and gently introduce it into the paunch, between the haunch bone and the last rib on the left side. This will instantly give vent to a large quantity of fetid air: a small tube of sufficient length may be introduced through the orifice, and remain there until the air is sufficiently evacuated: afterwards take out the tube, and lay an adhesive plaster over the orifice. Wounds of this kind are seldom attended with danger, unless it arise from the injudicious operator's introducing the instrument in a wrong part. After the wind has been expelled, and the body reduced to its natural size, let the following cordial drink be given.

#### THE DRINK.

Take	Geutian Root, in powder	..	..	1 ounce.
	Sulphate of Iron	..	..	3 drachms,
	Juniper Berries	..	..	2 ounces.
	Ginger, in powder	..	..	1 "
	Nitre	..	..	1 "

Mix for one dose and give it in a quart of warm ale, and repeat it every other day for two or three days.

## SECTION XIV.

### STAGGERS, VERTIGO, OR SWIMMING IN THE HEAD.

HORNED Cattle are subject to this complaint, which is generally known by the above-mentioned names. The seat of this disease appears to be in the head, it is supposed by some to arise from the stomach; and this is most probably the case. It proceeds from a quantity of phlegmatic humours pressing upon the brain and optic nerves, which cause a wavering and staggering motion of the body. The symptoms are attended with heaviness, giddiness, and dullness of the whole frame, and a disposition to sleep. If this disease is not checked in its infancy by bleeding, evacuations, and proper management, it may terminate in inflammation of the brain, or some other part of the body. This disease generally attacks beasts that have been kept in an impoverished state during a severe winter, and which have in the spring of the year been admitted into a fertile pasture: a redundancy of blood is thus produced, and other fluids press on the contracted vessels, while the animal economy is at the same time using its utmost endeavour to restore reduced nature to its original state. If it is not checked as in the manner stated before, inflammation in all probability will take place: in which case the animal shows all the symptoms of madness. The cure must first be attempted by taking away three to four quarts of blood. In two or three hours after give the following purging drink.

## THE DRINK.

Take Barbadoes Aloes	..	..	..	1 ounce.
Castile Soap	..	..	..	1 "
Salt of Tartar	..	..	..	1 "
Ginger, in powder	..	..	..	$\frac{1}{2}$ "
Epsom Salts	..	..	..	4 "

Mix for one drink.

Or the following :

Take Glauber's Salts	..	..	..	1 pound.
Nitre, in powder	..	..	..	1 ounce.
Emetic Tartar	..	..	..	1 drachm.

Mix for one dose.

Each drink to be given in a quart of warm gruel.

Either of the above drinks is generally sufficient for a purge for a beast of moderate size. Should they not operate in the space of sixteen or twenty hours, let one-half of either be given every twelve hours until the desired effect is produced, and then give the following drink.

## THE DRINK.

Take Emetic Tartar	..	..	..	1 drachm.
Volatile Salt of Ammonia	..	..	..	2 "
Camphor	..	..	..	2 "
Nitre, in powder	..	..	..	1 "

Mix for one dose, and pour a quart of gruel over it in a pitcher, and let it be given lukewarm.

It will be necessary to repeat this drink twice a-day until the symptoms begin to abate; afterwards once a-day will be sufficient: but so long as the fever continues to be attended with raving and delirious symptoms, it will be proper to take from one to two quarts of blood from the animal every two or three days. Keeping the body open with purgative medicines, bleeding, and administering what I have ordered above, will be

sufficient to effect a cure. If the disease continues, the following blistering ointment may, with the hand, be well rubbed on the poll, and on each side of the neck.

#### THE BLISTERING OINTMENT.

Take Yellow Basilicon	..	..	..	3 ounces.
Spirit of Turpentine	..	..	1	"
Pulvis Lyttæ	..	..	..	5 drachma.
Mix well together on a slab for use.				

It will be proper to repeat this blister once a-day for several days, and if it takes proper effect, it will give great relief. When it has ceased to discharge, the part may be rubbed with a little ointment, such as elder or marshmallows.

### SECTION XV.

#### OF THE MILK FEVER.

THIS disease is peculiar to cows in high condition at the time of calving. Young or old are liable to be attacked with it. Whenever it takes place, either at home or in the field, it is alike distressing to the animal, as well as troublesome to the owner. The puerperal or milk fever is most frequent during the hot weather of summer. Cows that are most likely to be attacked with this fever have large udders that are full of milk for several days before calving, and often very much inflamed and swollen. The best method of preventing this disease is as follows :—Take four or five quarts of blood from the beast about eight days before calving. Let the blood be taken away at night, and the beast kept in a fold-yard until next morning. The following drink should be given before the animal is put to grass, as it will check the overflow of milk and brace the relaxed vessels.

## THE DRINK.

Take Alum, in powder	..	..	..	2 ounces.
Nitre, in powder	..	..	..	1 "
Oak Bark, in powder	..	..	..	1 "

Mix for one dose in a quart of warm ale, and give it lukewarm. In two hours afterwards the beast may be turned out.

This drink may be repeated a second time if thought necessary. If the cow's udder is not sufficiently relieved by bleeding and the aforesaid drink, the part must be rubbed with the following ointment.

## THE OINTMENT.

Take Althœa Ointment	..	..	..	2 ounces.
Elder Ointment	..	..	..	2 "
Gum Camphor	..	..	..	3 drachms.
Goulard's Extract of Lead	..	..	..	1 ounce.
Mix for an Ointment.				

Let the udder be first fomented with hot water, and some of the ointment well rubbed in night and morning after the fomentation. This will greatly assist in removing the inflammation, as well as restore the milky secretion to its proper state. If the inflammation should continue, it will be proper to milk her once or twice a-day for several days before calving. Cows thus afflicted before calving require great care and attention at the time, by which this disease may in a measure be prevented. The milk fever most commonly attacks the cow on the second, third, or fourth day—sometimes in a few hours after calving. its symptoms correspond with those of many other fevers; a cold shivering fit comes on, accompanied with a throbbing and great sickness; a quick pulse, the tongue dry; the beast becomes very restless, the spirits are much depressed, loss of strength, the extremities cold. As soon as the disease takes place, it should be removed by giving the following drink.



## THE DRINK.

Take Gum Camphor	.. ..	3 drachms.
(powder, with a little spirit.)		
Nitre, in powder	.. ..	2 ounces.
Sulphur	.. ..	1 "
Epsom Salts	.. ..	4 "
Salt of Tartar	.. ..	$\frac{1}{2}$ "
Ginger, in powder	.. ..	$\frac{1}{2}$ "

Mix for one dose, and give it in a quart of ale or gruel.

If the fever makes but little progress, and the cow appears brisk and lively, if she eats her food moderately well, and her evacuations are nearly regular, it will be proper to repeat the drink every other day for two or three times. This drink will promote the milky secretions, by destroying the acidity which chokes up the lacteal vessels, and brings on inflammation of the udder.

If the fever appears gradually to increase from the first attack, care must be taken that the animal does not become costive. If therefore the fever continues to increase after giving either of the above drinks, her body must be kept open by giving one-half of the following drinks.

Take Epsom or Glauber's Salts	.. ..	1 pound.
Ginger, in powder	.. ..	2 ounces.
Mix for one drink.		

Put the whole into a pitcher, and pour over it three pints of boiling water: when lukewarm give the dose. If the fever does not attack her until the third day, give the following.

Take Barbadoes Alocs	.. ..	1 ounce.
Castile Soap	.. ..	1 "
Salt of Tartar	.. ..	1 "
Ginger, powdered	.. ..	1 "
Castor Oil	.. ..	4 "

Mix for one drink in a quart of gruel, and give it when lukewarm.

As soon as any of the preceding drinks have sufficiently evacuated the bowels and nearly ceased to operate, the following drink may be given.

**THE DRINK.**

Take Nitre .. .. .	1 ounce.
Sulphur .. .. .	1 "
Camphor .. .. .	2 drachms.
Salt of Tartar .. .. .	1 ounce.
Ginger .. .. .	1 "

Mix for one dose, and give it in a quart of warm ale or gruel, and repeat it if required.

It will be proper to notice that in every stage of this disease the body should be kept open with the purgative medicines before mentioned. They may be greatly assisted by injecting the following clyster up the rectum.

**THE CLYSTER.**

Take Linseed, bruised .. .. .	4 ounces.
Water .. .. .	2 quarts.
And strain through a cloth	
Then add Sweet Oil .. .. .	4 ounces.
Salt of Tartar .. .. .	2 drachms.
Mix, and force it up the anus.	

This clyster will soften the parts and fœces, and correct the acidity in the rectum, which prevails more or less in this disease. Cows afflicted with the milk fever require great care and good nursing; as they are sometimes unable of themselves to take a sufficient quantity of food for their support, it is necessary to throw a sufficient quantity of gruel into them, composed of linseed meal and barley flower. It may be given three or four times a-day, two or three quarts at a time.

**SECTION XVI.**

**TO EXTRACT THE PLACENTA, OR THE CLEANSING FROM  
A COW AFTER CALVING.**

To extract the cleansing from a cow requires care and proper management, lest violence should be used in drawing the naval-string too strongly. If the cow has gone her natural time, there

is not the least danger in taking it from her by manual operation, provided she is put in a proper position; otherwise it will be impossible to remove it without tearing and great danger. Persons who wish to remove the placenta, and give the cow that ease which nature requires after pains of this kind, should observe the following rules: First, let the cow be taken to a proper cow-house or hovel, and littered down with clean straw as soon as possible after calving. Care must be taken that her fore-parts stand on rising ground, or that the ground before be higher than that she stands on behind. This will greatly assist the operation. Some cows will part with their cleansing with little assistance while standing; others will part with it much more easily when lying down. In either case the operator must take a towel, or wisp of hay or straw, and lay hold of the umbilical cord or cleansing, and every time she attempts to strain, draw it gently forward, if only for a few inches at a time, until it is dislodged from the bed, and then it generally comes at once. There is but little chance of taking the cleansing properly away except every attention be paid to her throes or after-pains. We may assist nature very advantageously; but if we counteract her efforts, we expose ourselves to many disadvantages. Those cows that have slipped their calves before their regular time of gestation, and likewise such as have gone their regular time, where the cleansing has been neglected to be taken away, in a few days become so tender that the least pressure upon it will cause it to tear. In these cases it will be necessary to give her the following cleansing drink.

#### THE CLEANSING DRINK.

Take Juniper Berries	..	.	..	3 ounces.
Rubbed fine with a little Turpentine.				
Spermaceti	..	..	..	1 "
Flower of Sulphur	..	..	..	1 "
Grains of Paradise	..	..	..	1 "
Horse Spice	..	..	..	1 "
Oil of Savin	..	..	..	30 drops.

Mix, and give it in a quart of warm ale, and repeat it in twenty-four hours afterwards if required.

Or the following :

Take Juniper Berries	..	..	..	2 ounces.
Borax, in powder	..	..	..	1 "
Emetic Tartar	..	..	..	1 drachm.
Myrrh, in powder	..	..	..	$\frac{1}{2}$ ounce.
Opium	..	..	..	$\frac{1}{2}$ drachm.
Horse Spice	..	..	..	2 ounces.

Mix for one dose

It will be proper to repeat this drink in thirty hours if required.

The above drinks are very excellent for cows after calving, in cleansing and healing those vessels which have become lacerated by the division of the placenta from the uterus. When the flux or discharge begins to cease, if any deficiency is found in the milky secretions, it will be advisable to give them the following cordial drink, which will be found excellent after calving.

#### THE CORDIAL DRINK.

Take Anise Seed, fresh powdered	..	..	..	2 ounces.
Cummin Seed, fresh powdered	..	..	..	2 "
Sulphate of Iron	..	..	..	$\frac{1}{2}$ "
Capsicum, in powder	..	..	..	$\frac{1}{2}$ "
Nitre, in powder	..	..	..	1 "

Mix, and give it in a quart of warm ale or beer, and repeat it if required.

## SECTION XVII.

### HOW TO EXTRACT A CALF.

ALL persons who have the management of cows should be acquainted with the method of extracting a calf, and should

know when it is in a proper or natural position. Those positions are unnatural in which the calf is presented otherwise than with its head and fore feet first, and its back towards the cow's back.

Calves are often presented in a variety of postures, for which no just reason can be assigned : and whenever they present themselves in a wrong position both cow and calf are in danger, and that more or less according to the ability the person possesses who is employed to give the required relief.

In the first place, after the waters are broken, and only the head and one foot present themselves, you must lay hold of the calf's head, and wait till the throes are off ; then gently push it back, and rectify the other foot ; after which it may be extracted without much danger.

Secondly, if the head only presents itself, and both feet are left behind, the head must be pushed back with a gentle hand as soon as her throes are off ; and the feet must be placed properly and with the utmost care, lest by any means you wound the uterus.

Thirdly, if all the feet are turned where the back ought to be, (towards the top of the uterus) it will be impossible to extract the fetus until it is put in a proper position. In operations of this kind every thing depends upon the management and activity of the person employed in putting the beast in a favourable posture. The hind parts of the cow must be sufficiently raised with straw, or bags filled with that or anything else that is soft and easy to lie upon ; and it must be properly placed under her. By these means the person will be very much assisted in putting the calf in a suitable way for extraction. Wait a little until her throes or pains return ; then let nature have your best assistance.

Fourthly, it sometimes happens that the hind legs appear first : in this case it will be found best to extract the calf in that position, than to attempt to turn them.

Fifthly, instances frequently occur of dropsy in the head ; this may be known by its largeness, in which case the other parts will be generally small and wasted away. Under these cir-

cumstances, if the calf cannot be extracted in the common way, the best method will be to fix a proper cord round each foot, or upon the upper or under jaw (as may be thought most convenient at the time of the operation), and then to assist the animal every time nature attempts to do its office. If the calf be dead it may be cut with a proper knife. This requires a person of skill and experience, otherwise he may cause the death of the cow.

Sixthly, frequent instances also occur where the shoulder presents itself first at the mouth of the uterus: this is a difficult case, and requires that the hand be introduced in search of the fore legs; or, if thought more proper, the hind legs may be brought forward: this must be left to the skill of the person employed.

Seventhly, it sometimes happens in cases where the calf is dead, or dropsical in the head, that instruments are necessary to be used. When this is the case, the cow is reduced to a weak and emaciated state. The instrument may be formed out of a small rod of iron, or very strong wire, sufficiently polished, with a hook at the end. This hook must be so placed in the operator's hand as not to endanger the uterus when introduced. It must then be fixed in some part of the calf's head, as the sockets of the eyes, in the mouth, or any other part about the head as may appear most convenient at the time of extraction. Sometimes the fetus is so much enlarged, and the womb so much contracted, as not to admit of extraction. It will then be necessary to take it away in pieces. This may be done, but requires a man to be skilled in the practice of it. The knife must be made for the purpose, and the blade so placed in the ball of the hand, with the fore-finger over the point, as to protect the uterus from danger of being wounded. In all cases where the cow has been roughly handled, and the inner parts much bruised, the following mixture will be found useful in warming, healing, and stimulating the injured parts.

## THE MIXTURE.

Take Compound Tincture of Myrrh	..	2 ounces.
Compound Tincture of Benzoes	..	2 "
Camphorated Spirit of Wine	..	2 "
Barbadoes Tar	.. .. .	1½ "
Olive Oil	.. .. .	1½ "
Tincture of opium	.. .. .	1 "
Treacle	.. .. .	4 "

Mix it altogether, and keep it in a bottle for use.

The method of using this mixture is as follows: Take from two to four table-spoonfuls in the hollow of the hand; then introduce it up the matrix or womb: or a sponge may be filled with a sufficient quantity of the mixture, and introduced as above, pressed well out and brought back again; either way will do. As soon as the operation is over, give the drink as follows.

## THE DRINK.

Take Nitre, in powder	.. .. .	1 ounce.
Juniper Berries	.. .. .	2 "
Spermaceti	.. .. .	1 "
Cummin Seed	.. .. .	2 "
Bay Berries	.. .. .	1 "

Mix for one drink,

And give it in a quart of ale, and repeat it for three mornings. Her body likewise should be kept open with mashies of scalded bran and a little oatmeal in it, and an ounce of nitre in each mash; and proper attention will soon restore the animal to her former health.

## SECTION XVIII.

## THE FALLING DOWN OF THE CALF BED.

THIS is an accident of frequent occurrence among old cows at the time of calving, and proceeds from the violent motions that attend the extracting of the calf, and likewise from the re-

laxation of the ligaments of the uterus. Some cows are more subject to the falling down of the calf bed than others : this appears in a great measure to proceed from the shape and make of the cow in those parts. The cows most liable to this complaint rise considerably on the small of the back, in form of a curve, and begin to lower towards the tail : the hips, rump, and sirloin are chiefly straight. Cows made in this form denote great weakness in those parts ; and without care and proper management at the time of calving, are almost sure to have this complaint. The observance of the following rules may be the means of preventing it.

First, if they are kept in a cow-house at the time, the floor or pavement should be on a level ; but it would be greatly to the advantage of some cows to stand higher behind than before, for a considerable time before calving ; as it would enable them when down to rise with more ease, and there would be less danger of straining themselves in rising. If the falling down of the calf bed be expected, the cow ought to be carefully watched at the time of calving ; and as soon as that takes place there ought to be had in readiness a clean sheet to put underneath and around the calf-bed, if she lies down, or to support it if standing up, and likewise to protect it from particles of dirt or straw adhering to it, as also from the effects of the air. Then let the operator take away the placenta or cleansing in the gentlest manner, lest an effusion of blood takes place, and endanger the life of the animal. Afterwards bathe and wash the uterus with the following lotion.

#### THE LOTION.

Take Rectified Spirit of Wine	..	..	8 ounces.	} dissolve.
Camphor	..	..	1 "	
Goulard's Extract of Lead	..	..	1 "	
Soft Water	..	..	1 quart.	
Mix the whole for use.				

As soon as the parts have been well washed with this lotion, her hind parts must be sufficiently raised, and the operator's



hand be well rubbed over with linseed oil; then endeavour to find the middle of the calf-bed, and by the gentle pressure of your hand it may in general be replaced with ease. Sometimes it is with difficulty prevented from falling out a second time; when this happens take a small wire and pass it through the lips of the womb, and bend each end of the wire to prevent its falling out. It may be permitted to remain there for several days, or until the calf-bed gets sufficiently fixed in its former situation; which may be easily known by the animal's having no symptoms of straining herself; after which the wire may be removed. Or by this method, which will be found to answer the purpose in many instances:—Take a cord or girth, and brace round the back and belly so tight as to prevent the cow from heaving and throwing it out again, and let the cow's fore-part stand in a declining position. As soon as the calf-bed is properly replaced, and made secure, it will be found necessary to give her the following drink, which will remove the after-pains and strengthen the parts.

#### THE DRINK.

Take Oak Bark, in powder	..	..	1 ounce.
Ginger, in powder	..	..	1 “
Prepared Chalk	..	..	1 “
Cummin Seed, fresh powdered	..	..	2 “
Grains of Paradise	..	..	$\frac{1}{2}$ “
Tincture of Opium	..	..	$\frac{1}{2}$ “
Treacle	..	..	4 “

Mix, and put the whole into a pitcher; then pour over it a quart of hot ale and give it lukewarm.

This drink should be repeated every day for two or three times. Warm water, mashes, and proper treatment should be particularly attended to.

### SECTION XIX.

#### OF THE LOCKED JAW.

THIS disease is not so common among neat cattle as it is among horses; whenever it takes place it generally begins with

a sudden stagnation of the whole system ; every muscle appears seized at once, and the jaws are so fast closed as often to require an instrument to force them open at the time of giving medicine. The first thing necessary towards a cure is to bleed ; taking away three, four, or five quarts, according to the animal's size and strength ; after which, give the following drink.

#### THE DRINK.

Take Gum Opium two drachms ; best Asafetida one ounce ; put it into a marble mortar, and gradually add a pint of boiling Water, keep constantly stirring until all is dissolved ; then add Spirits of Hartshorn two ounces ; Capsicum Powder half an ounce ; Treacle four ounces. Mix, and give it in a pint of gruel.

It will be proper to repeat this drink once or twice a-day, so long as the symptoms remain violent.

If this disease attacks the beast in the winter season, two, or three pails of warm water may be thrown on her ; and if in the summer, cold water may be used ; afterwards let liquid blister be well rubbed for half an hour along the parts so affected, which will stimulate the muscles to their proper action. Let two persons rub the other parts of the body with a wisp of straw ; afterwards cover the animal down with a warm blanket, as warmth in this disease is always found beneficial.

Locked jaws, or convulsions of this kind, frequently proceed from wounds in different parts of the body, where a nerve or tendon is injured : but other causes produce convulsions, as the taking of poisonous herbs or insects ; these irritate the stomach and intestines ; by which the whole body more or less is attacked with convulsions. If the symptoms are not removed in twenty-four hours, let it be treated as the inflammatory fever.

## SECTION XX.

ON THE UTILITY OF PURGING MEDICINES, IN MOST  
DISEASES INCIDENT TO YOUNG CATTLE.

NEAT cattle are subject to a variety of diseases as well as horses, though not to the same extent. This may in a great measure be attributed to the labour and fatigue which the latter undergo more than the former.

Physic for cattle, when properly administered, is one of the principal remedies towards curing most fevers and inflammatory diseases; nevertheless, it is seldom advisable to give physic to an animal, unless it labours under some disease. Some graziers, during summer, give old cows purging drinks, by way of keeping off the downfall, which in general have had the desired effect; but in other respects they seldom require medicines of this kind. Neat cattle are by nature of a greedy disposition; their appetite is unbounded, and scarcely ever satisfied. Milch cows in particular are of this disposition; for when feeding on herbage, or other food agreeable to their palate, they will often continue eating until they are in danger of suffocation: thus the powers of digestion are overstrained, and a fever or other inflammatory disease is frequently induced; in which case purgative medicines alone can give relief.

As fevers are in general accompanied with inflammation, purgative medicines alone can give relief; they unload the stomach and intestines of the mass of undigested crudities, which so rapidly increase all diseases of this kind.

External inflammation proceeds from outward causes, such as wounds, according to their situation and extent; bruises, and other accidents to which they are liable on different parts of the body: all these produce inflammation in the part according to the severity, affect the whole system, and frequently bring on fever; and if not soon removed by administering proper purga-

tive medicines, the animal may be quickly lost. Some persons are of opinion that physic prevents the wound from forming a proper pus or matter. I have not found it so in any case ; on the contrary it lessens the inflammation in the part affected, and the matter that is formed is in general smaller in quantity and better in quality, and the wound is much healthier and heals sooner. The greatest danger in wounds is when the inflammation exceeds its proper bounds, and instead of generating pus, a gangrene takes place ; this, if not timely checked, will disseminate itself through the whole system. In this case the animal will appear depressed in spirits, with wildness of the eyes, the pulse being quick, low, and weak. After a gangrene or mortification once takes place, and enters the system, little can be expected from the aid of physic. In all kinds of fevers, whether symptomatic, local, or primary, purgative medicines are of great importance ; for without a free passage through the intestines there is but little hope of recovery.

In different parts of this Treatise a great variety of purging drinks will be found.

## SECTION XXI.

### THE HOOSE, OR COUGH.

DISEASES of this kind are often very troublesome to cure, as well as distressing to the animal. Cows and young cattle are the most liable to complaints of this nature. The hoose, or cough proceeds from taking cold either after calving, or from being kept in a warm hovel, and afterwards exposed to the inclemency of the weather ; which produces an overflow of extraneous matter in the throat, and causes a continual tickling motion in the part. The symptoms are shortness of breath, continual effort to cough or hoose, attended with great difficulty of respiration, which seems to press hard upon the diaphragm and the

abdominal muscles. Without relief it may bring on some local complaint, and terminate in a fever, or an inflammation of the lungs, and so carry off the animal.

The following drink will be found useful in removing diseases of this kind.

#### THE DRINK.

Take Barbadoes Aloes	..	..	..	1 ounce.
Balsam of Sulphur	..	..	..	2 "
Emetic Tartar	..	..	..	1 drachm.
Salt of Tartar	..	..	..	1 ounce.
Ginger	..	..	..	1 "
Treacle	..	..	..	4 ounces.

Mix ; and add, by a little at a time, one quart of gruel, and give it when lukewarm.

Then give the following, which will be found very powerful in removing the offending humours from the pulmonary vessels, and restore them to their proper tone. It warms, stimulates, and gives fresh action to the stomach and intestines ; by which nature will return to her former course, and the health of the animal be quickly restored.

Take Balsam of Sulphur	..	..	..	2 ounces.
Salt of Tartar	..	..	..	1 ounce.
Dover's Powder	..	..	..	$\frac{1}{2}$ "
Gum Asafetida	..	..	..	3 drachms.

Bruise the asafetida, and add the other ingredients in a pitcher, and pour a quart of warm ale over it; cover it and give it lukewarm, and repeat it every other day if required. By this method of treatment, together with plenty of good mashes, warm water, and proper management, the beast will soon be well.

## SECTION XXII.

### RHEUMATISM, OR THE JOINT FELLON.

THE word fellon is of frequent occurrence in the country ; it is chiefly applied to diseases proceeding from cold, and is vari-

ously called as follows,—Cold Fellon, Joint Fellon, and Chine Fellon.

This is a disease of the joints, and chiefly affects milch cows and young cattle in the spring of the year; it is in general occasioned by keeping the animals in a starving state during the winter, and suddenly exposing them in the spring to the inclemency of the north and north-easterly winds, in some low situation.

The symptoms are as follow :—The animals for the first two or three days appear only stiff in the joints; afterwards they begin to swell; yet there is no appearance of inflammation; but a cold phlegmatic tumour rises in the joints, accompanied with much stiffness, and frequently extends over the body to such a degree, that the beasts when down are unable to rise without some assistance. Cattle labouring under this disease suffer very much from the severe pain in the parts, as well as from listlessness and inability to stir. As soon as this disease makes its appearance, the animal must be taken to a warm cow-house or stable, as warmth very much assists nature, and tends to carry off the disease. The joints, and all the parts affected with stiffness, must be well rubbed with the following mixture.

#### THE MIXTURE.

Take Neatsfoot Oil..	..	..	..	$\frac{1}{2}$ pint.
Spirit of Sal-ammoniac	..	..	..	4 ounces.
Spirit of Turpentine	..	..	..	4 “
Gum Camphor	..	..	..	2 “
(dissolve in the Oil or Turpentine)				
Tincture of Opium	..	..	..	2 “

Mix in a bottle, well stopped for use.

These oils should be well rubbed in the joints once or twice a-day; they will warm and stimulate the parts, and expel the flatulency which attends tumours of this description. There is seldom any fever attending this disease, except of a nervous kind:

the whole frame appears to be affected with a sluggish disposition, and a want of animal heat: this, by some persons, is called rheumatism, and by others the joint fellon.

The method of cure consists in giving fresh vigour to the animal, in order that nature may revive and enable it to cast off the sluggishness attendant on complaints of this kind. The following drink should be given.

THE DRINK.

Take Dover's Powder..	..	..	6 drachms.
Gum Camphor	..	..	2 "
Calomel ..	..	..	1 "
Ginger, in powder	..	..	$\frac{1}{2}$ ounce.

Mix, and give it in a pint of gruel. Let the camphor be powdered with a little spirits of wine. This medicine will be found highly serviceable in throwing this disease off the system, and should be repeated daily, or every other day if required.

In some instances this disease may change to acute or inflammatory rheumatism, which will be attended with fever, pain, and swelling in the joints. When this happens it will be necessary to keep the body open, by giving the animal one of the following drinks, and repeat it as necessity requires.

THE DRINK.

Take Glauber's Salts	..	..	1 pound.
Emetic Tartar	..	..	1 drachm.
Ginger, in powder	..	..	1 ounce.

Mix for one dose, in a quart of gruel.

If this drink should not operate in twenty hours, let one half of the above quantity be given night and morning until the desired effect is produced.

## SECTION XXIII.

## POISONS.

POISONS may be considered under two distinct heads; the one external, the other internal. I shall, in the present section, confine myself to the latter.

They proceed from different causes during the summer season, such as eating poisonous herbs, or drinking stagnant or putrid water, that swarms with insects of various kinds, many of which are of a poisonous nature; but whether the beast has taken poison by eating deleterious vegetables, or drinking stagnated water, the symptoms are the same, namely—a violent pain and heat at the stomach: the body frequently swells to an alarming size, attended with giddiness and stupidity. From whatever source the poison may have been taken, if allowed to remain in the stomach, and not speedily removed by suitable medicines it generally proves fatal in a short time.

Beasts when affected with poison require speedy assistance. If they begin to swell, let a penknife be introduced (between the haunch-bone and the last rib on the left side) into the paunch; this will instantly give relief by expelling the foul air; more particularly if the poison proceeds from vegetables. After a beast is discovered to be in this state, let the following drink be immediately given.

## THE DRINK.

Take Barbadoes Aloes	..	..	..	3 drachms.
Epsom or Glauber's Salts	..	..	..	12 ounces.
Emetic Tartar	..	..	..	1 drachm.
Salt of Tartar	..	..	..	1 ounce.
Ginger	..	..	..	1 "

Mix for one dose,

And give it in a quart of gruel. this will in general operate in sixteen or twenty hours; if not, let one half of the above be



given every night and morning until the desired effect is produced. This drink will be found to correct the acrimony of the poison and carry it off by evacuations.

After the aforesaid drink has been given, administer the following, in order to destroy the effects of the poison, and to assist the purging drink in forcing a passage through the intestines.

Take Salt of Tartar	..	..	..	1 ounce.
Castor Oil	..	..	..	4 "
Tincture of Opium	..	..	..	$\frac{1}{2}$ "

Mix, and give it in a quart of gruel and repeat it twice a-day.

If the animal is in good condition, let three quarts of blood be taken away. By strict attention to the above method of treatment, there will be little doubt of a speedy cure.

## SECTION XXIV.

### THE BITE OF VENOMOUS REPTILES.

IN this kingdom there are but few poisonous reptiles compared with those found in warmer climates, where they often prove fatal to man and beast.—The viper or adder is most common in this country, and the bite of this reptile is often attended with dangerous consequences. Neat cattle are more liable to be stung by this reptile than any other of the domestic animals: some instances have been known (when the tongue of the beast has been stung while grazing) that have proved fatal. Adders seldom attack cattle unless the latter disturb them while grazing. This accounts for so many being bitten about the head and feet. The following liniment will be found a powerful remedy in checking the progress of the poison, and expelling it from the part affected.

**THE LINIMENT.**

Take Olive or Rape Oil	..	..	..	1 pint.
Strong Spirit of Hartshorn	..	..	..	8 ounces.
Spirit of Turpentine	..	..	..	4 "
Tincture of Opium	..	..	..	4 "
Gum Camphor	..	..	..	2 "

Mix in a bottle, and well shake it every time it is used.

Let this liniment be well rubbed upon the part affected two or three times a-day, until the swelling and inflammation abate. In very dangerous cases the parts affected, especially those about the head, should be fomented with a decoction of poppy heads and marshmallows.

Should any feverish symptoms appear, which frequently happen during hot weather, it will be necessary to take a few quarts of blood away, and in four hours afterwards to give the following purging drink.

**THE PURGING DRINK.**

Take Epsom or Glauber's Salts	..	..	..	1 pound.
Emetic Tartar	..	..	..	1 drachm.
Ginger	..	..	..	1 ounce.

Mix, and give for one dose, in a quart of gruel, and repeat one-half of the drink daily until the symptoms subside.

**SECTION XXV.****THE DOWNFALL IN THE UDDER OF COWS.**

THIS disease is of the utmost consequence to the owners of neat cattle. Young cows in high condition are the most liable to it, especially at the time of calving. Such as are most aged are more subject to it during hot and sultry weather, particularly

those which are fattening for the butcher : when this is the case the loss is considerable, a summer's keep being generally thrown away to the disappointment of the owner. Cows of a full habit of body, when overheated, or when they have taken cold, are very liable to it at all seasons. This disorder makes its appearance in an inflammatory tumour, collected from a gross habit of body, and deposited upon some of the lacteal vessels, where its presence is soon observable by the lessening of the milk in quantity, and changing it to a ragged, bloody, and corrupt appearance. At other times, the milk or corruption is totally stopped, and the tumour gradually proceeds to a state of suppuration; when this is the case it must be opened with a lancet, or one or more of the paps cut off, as may appear most convenient for discharging the matter. In some instances it may be found necessary to cut off the whole of the udder ;—an operation that requires considerable skill. The bleeding of these wounds must be stopped with the following styptic powders.

#### THE STYPTIC POWDERS.

Take Blue Vitriol	..	..	..	..	2 drachms.
White Vitriol	..	..	..	..	2 "
Burnt Alum	..	..	..	..	2 "
Bole Armenian	..	..	..	..	2 "

Mix for use.

It may, if necessary, be supported with a proper bandage across the loins : and after the blood is stopped (which may be expected in about twelve hours), let the wound be dressed with proper digestives. It will be of great benefit to the owner to prevent, if possible, the occurrence of this disease ; for if it is permitted to proceed to the state above described, the loss of time and trouble will be considerable. As soon as the downfall of the udder is discovered, if the animal is in the pasture fetch her out, and take from three to four quarts of blood away, according

to her size and strength. If bled at night she may stand in an open yard till morning, and then give her the following purging drink.

#### THE PURGING DRINK.

Take Barbadoes Aloes	..	..	..	3 drachms.
Glauber's or Epsom Salts	..	..	..	1 pound.
Ginger, in powder	..	..	..	1 ounce.

Mix for one drink, and give it in a quart of gruel.

If this drink should not operate sufficiently in fourteen hours it may be repeated. By such means the inflammatory symptoms will soon disappear.

The udder may be well rubbed with the following mixture, which will be found an excellent application for inflammatory tumours in these parts.

#### THE OINTMENT.

Take Althea Ointment	..	..	..	4 ounces.
Calomel	..	..	..	$\frac{1}{2}$ "
Camphor	..	..	..	2 drachms.
Linseed Oil	..	..	..	1 ounce.
Goulard's Extract of Lead	..	..	..	1 "

Mix for a liniment.

Let this mixture be rubbed on the part affected every night and morning after milking; and if very bad the cow may be milked in the middle of the day, and her udder frequently bathed with warm water. By frequent milking, and the application of the above liniment, the inflammation is generally removed in a few days.

After the purging drink has ceased to operate, let the following drink be given.

#### THE DRINK.

Take Juniper Berries	..	..	..	2 ounces.
Nitre, in powder	..	..	..	2 "
Resin, in powder	..	..	..	4 "

Mix for one drink, and give it in a quart of ale.

It will be requisite to repeat this drink every third day, for three or four times : or the following may be given.

Take Nitre, in powder	..	..	..	2 ounces.
Alum, in powder	..	..	..	4 "
Resin, in powder	..	..	..	4 "
Juniper Berries	..	..	..	2 "
Ginger, in powder	..	..	..	2 "

Mix for one drink.

This may be repeated every third day in the same manner as the former.

The above drinks will be found excellent for curing the down-fall in the udder of cows ; and in some cases one is sufficient to carry it off. If it be repeated every five or six weeks it will prevent its return, and give time for the animal to fatten. But if this be neglected the season may be lost, and the beast be in a worse condition at the latter end of the year than before it was turned out in the spring. It therefore behoves every person to use his best endeavour to prevent this disease ; or, if possible, not to suffer it to proceed to suppuration.

## SECTION XXVI.

### WOUNDS.

WOUNDS are common to horned cattle as well as others, and it is of importance to know how to treat them in different situations of the body ; as the management must vary according to the part where the wound is seated, and the circumstances under which it takes place. The animal's constitution and habit of body must be considered, as well as the immediate structure of the divided substance ; and it must be ascertained with what description of instrument the wound was made, whether with a

sharp or blunt one; if with the former, and the wound is not considerable, it will be advisable to attempt a union by the first intention, which can be performed in the following manner.

First, cleanse the wound from dirt and all extraneous matter; then pour in a sufficient quantity of styptic tincture, composed of Fryar's balsam and compound tincture of myrrh, of each one ounce; muriatic acid thirty drops; mix, and bring the edges of the wound together, and close it neatly with a proper suture as follows:—Take a flat crooked needle and a thin white leather cord, well greased or tallowed, which is preferable to silk or thread. Every stitch across the wound should be tied, and an inch allowed between each stitch; this will generally be found sufficient for most purposes. When the parts are properly closed, take a pledget of tow or lint, and soak it in the styptic tincture, and apply it over the mouth of the wound; then secure it well on with a proper bandage or roller: the bandage may be removed once a-day, and fresh pledgets, soaked in the styptic tincture, applied and rolled on as before.

This kind of union is very difficult to accomplish on the ox, except on the lower extremities. Cattle are more liable to accidents of this kind in summer than any other time, in consequence of their gadding about and breaking out of their pastures; likewise, when strange cattle are intermixed they often fight, and are apt to gore one another with their horns. Wounds that are in a fleshy part, deep and considerably bruised, require a different treatment. The inflammation is often great, the pulse is strong, and feverish symptoms generally begin to appear. Unless the wound takes a favourable turn a gangrene will ensue, which indicates approaching mortification; and if not timely checked, death may be expected. In cases so desperate, every means should be used to support the animal and to check the serum, in order to promote suppuration.

First, examine every direction of the wound with a probe: if this is not at hand, let it be examined with a candle, which is preferable in all deep wounds in the fleshy parts. Then take a

sufficient quantity of finely powdered nitre, and sprinkle it over the wound inside and out; rub it gently in, and then dress the wound with the following styptic oils.

#### THE STYPTIC OILS.

Take Linseed Oil one pint; put it into a pot that will hold three times the quantity; then add, by a little at a time, two ounces of Oil of Vitriol, stirring it constantly until united; add Spirit of Turpentine half a pint. Mix, by a little at a time, and keep stirring until it is united.

The manner of using these oils depends on what part of the body the wound is made, and the position in which it may be necessary to put the animal at the time of dressing. Let a sufficient quantity be poured into the wound, and gently rubbed round with the finger, if long enough to reach the bottom; if not, let a candle be employed; with this the oils may be introduced to the bottom of the wound. Where this is not practicable, a tent of tow or lint may be dipped in the oils, and introduced to the bottom with a probe: the tent must be sufficiently long, so as to admit of one end hanging out of the wound, by which means it may be taken out and fresh introduced. These oils warm and stimulate the parts, and soon prevent any putrid appearance, to which wounds of this nature are liable. The oils seldom require to be used more than once or twice, even if the wounds are deep and much bruised, and where there is a tendency to putrefaction. Such wounds as have been neglected at first, and have assumed a putrid appearance, may be dressed with strong oil of vitriol, by dipping a skewer in it and applying it all over the wound for several times together. Immediately after using either of the above, let the wound be dressed with the following digestive ointment.

## THE DIGESTIVE OINTMENT.

Take Yellow Basilicon	..	..	..	4 ounces.
Resin	..	..	..	2 "
Horse Turpentine	..	..	..	2 "
Linseed Oil	..	..	..	2 "
Spirit of Turpentine	..	..	..	2 "
Verdigris, in fine powder	..	..	..	1 "
Melt the whole together except the turpentine, which add after it is taken off the fire.				

Mix, and keep it in a pot for use.

The best method of using this ointment is to place the beast in a suitable position, so that the ointment may reach the bottom of the wound. Then take a sufficient quantity of the ointment, melt it in an iron ladle, and pour it lukewarm into the wound; cover it over with a pledget of tow dipped in the same, and fasten it on with a roller, or by tacking a few stitches across. The wound may be dressed once a-day, every other day, or every third day, as may be thought proper. If the inflammation and swelling are considerable, it may be fomented, after the wound has been dressed, with a fomentation made with the following.

Take White Poppy Heads, in number,	..	12
Camomile Flowers	..	4 ounces.
Marshmallow Roots	..	$\frac{1}{2}$ pound.
Ale-dregs or Water	..	2 gallons.

Boil for a fomentation.

Foment the parts affected, two or three times a day, with hot flannels wrung out of the above fomentation. After each time, let the tumour and round the wound be well rubbed with the following ointment.

## THE OINTMENT.

Take Mercurial Ointment	..	..	..	4 ounces.
Althæa Ointment	..	..	..	4 "
Gum Camphor	..	..	..	1 "



Dissolve it in two ounces of Spirit of turpentine, then mix the whole together and keep it in a pot tied down for use.

This ointment will soften all kinds of hard tumours about wounds, and remove the inflammation. If strict attention be paid to the above application, the wounds, though ever so bad, may in a short time be brought to a state of suppuration; by which means the swelling and inflammation will soon disappear, and the bottom of the wound will begin to heal and fill up with little granulations of flesh, as the discharge begins to diminish. In cases of this kind it frequently happens that these granulations become too luxuriant, and require the application of medicine to keep them down, which may easily be done with the following powder; but when there is proud flesh in the wound it will require much stronger caustic medicines.

#### THE POWDER.

Take Resin, in powder	..	..	..	2 ounces.
Bole-armenian	..	..	..	1 "
Burnt Alum, in powder	..	..	..	$\frac{1}{2}$ "
Blue Vitriol, in powder	..	..	..	$\frac{1}{2}$ "

Mix it together, and keep it in a bottle for use.

After the wound has been dressed with the digestive medicines, as stated above, dust these powders once or twice a-day over the surface of the wound. If the wound only require healing, it may first be annointed with the following tincture, and the powders afterwards dusted on.

#### THE TINCTURE.

Take Fryar's Balsam	..	..	..	1 ounce.
Compound Tincture of Myrrh	..	..	..	1 "
Nitrous Acid	..	..	..	2 drachms.

Mix it gently together for use.

These powders and tincture will generally keep down all superfluous flesh, and assist nature in healing the wound.

Wounds that penetrate the cavity of the chest require nearly the same treatment as other wounds: in some cases it will be advisable to omit using the styptic oils as composed of oil of vitriol, &c. Wounds of the abdomen require skill and judgment in the management of them; for should any of the intestines be displaced, or exposed to the air, it might endanger the life of the animal.

The following lotion will be found useful for purposes of this kind.

THE LOTION.

Take Nitre, in powder	..	..	..	$\frac{1}{2}$ ounce.
Goulard's Extract of Lead	..	..	..	2 "
Camphorated Spirit of Wine	..	..	..	4 "
Warm Water	..	..	..	$\frac{1}{2}$ "

Mix, and keep it in a bottle for use.

In all accidents where part of the intestines are exposed to the air, they may be well bathed with this lotion lukewarm, and afterwards with the ointment composed of mercurial ointment, camphor, &c, as stated in this section, and support them with a roller or bandage. The diet of the animal in cases of this kind should consist chiefly of bran mash, with a little ground barley and powdered linseed mixed with it.

Hemorrhages in wounds frequently happen; it is therefore highly necessary that every one should be acquainted with the course of the arteries. When a considerable blood-vessel is wounded or divided, and the hemorrhage is likely to prove dangerous, our first care must be to stop the bleeding by pressure, provided the wound be in a situation to admit of the application of a roller or bandage. Pressure, where it can be properly applied, is certainly the best remedy: but as there are many cases that will not admit of this treatment, the stoppage of blood may be attempted by actual cautery, where the parts will allow it; or you may try to stop the bleeding by applying the following styptic.

## THE STYPTIC.

Take equal parts of nettles and blue vitriol; bruise them together in a mortar until a pulp is formed, and apply it to the wound.

This will generally stop the blood as soon as applied: or the following powders may be used. Sometimes it will be found most convenient to tie up the blood-vessel; but these circumstances must be left to the judgment of the operator at the time.

## THE POWDERS.

Take Blue Vitriol	..	..	..	..	2 drachms.
Green Vitriol	..	..	..	..	2 "
White Vitriol	..	..	..	..	2 "
Bole-arménian	:	..	..	..	2 "

Powder and mix the whole together for use.

The mouth of the divided vessel must be covered over with a sufficient quantity of these styptic powders, and pressed to with lint or tow, and this well secured by a roller or bandage.

## SECTION XXVII.

## WOUNDS OF THE JOINTS.

THESE are not so common among horned cattle as among horses; the former are seldom troubled with any wounds in these parts except such as are of a common nature, and which generally heal by the first intention; while the latter are subject to severe contusions, that often render them of little use afterwards. The treatment of wounds in the joints must depend on the manner in which they have been received. Such as arise from severe bruises are more difficult to heal than those received from a cut or rent. All recent wounds that are attended with swelling and inflammation should be fomented with the fomen-

tation—(Section XXVI, as there directed)—after which rub them well with the ointment composed of mercurial ointment, camphor, &c., and dress the wounds with the digestive ointment, as both directed in Section XXVI.—These dressings should not be persisted in more than three or four days; or till the inflammation and swelling begin to subside, otherwise they may occasion a discharge of joint oil.

The following mixture is adapted for the cure of wounds in the joints of horned cattle.

#### THE MIXTURE.

Take <i>Ægyptiacum</i> .. .. .	2 ounces.
Compound Tincture of Myrrh ..	2 “
Compound Tincture of Benzoin ..	2 “
Beyr of Antimony or <i>Aquaferis</i> ..	$\frac{1}{2}$ “

Mix, and keep it in a bottle for use.

The wound should, if possible, be filled with this mixture, either by injection or pouring it in, and its mouth should be immediately stopped with lint. This method, if persevered in, will be found sufficient to cure all wounds in the joints of horned cattle.

### SECTION XXVIII.

#### STRAINS AND BRUISES.

THESE accidents daily happen to cattle of all descriptions; and as most persons are well acquainted with them, they require but little explanation from me.

Strains or bruises may affect either the muscles, ligaments, or tendons: strains of the former are generally attended with considerable inflammation; and the latter with a rupture or breaking down of the tendon: but this last is not common among

horned cattled. Strains in the stifle, whirl-bone, and back, are very frequent amongst these animals, and are chiefly occasioned by their romping with each other. The cure in all the different parts must first be attempted by removing the inflammation and swelling.—The following mixture will be found very excellent for strains of this description.

#### THE MIXTURE.

Take Spirit of Sal-ammoniac	..	..	3 ounces.
Spirit of Turpentine	..	—	3 “
Rape or Olive Oil	..	..	3 “
Spirit of Camphor	..	..	3 “

Mix, and keep it in a bottle for use.

These oils are good for all kinds of strains, bruises, and hurts in different parts of the body. Let them be well rubbed in on the part affected once or twice a-day; and if necessary let the parts be fomented with hot water before using this mixture. If any feverish symptoms should appear, it will be proper to keep the bowels open by giving the purging drink as follows.

#### THE PURGING DRINK.

Take Glauber's or Epsom Salts	..	..	1 pound.
Emetic Tartar	..	..	1 drachm.
Ginger in powder	..	..	1 ounce.

Mix for one dose, and give it in a quart of gruel.

This drink generally operates in the space of fourteen or twenty hours; if not, let one half of the above be given night and morning until the desired effect is produced.

Strains of the hip-joints, shoulder, or stifle, and back, being more deeply seated, require a more powerful application than the former. In these cases the following will be more serviceable to produce the desired effect.

## MIXTURE.

Take Soap Liniment	..	..	..	4 ounces.
Spirit of Sal-ammoniac	..	..	..	2 "
Spirit of Turpentine	..	..	..	2 "
Oil of Origanum	..	..	..	1 "
Rape Oil	..	..	..	2 "
Cantharides	..	..	..	2 drachms.
Sublimate, two drachms (dissolve in a little				
Spirit of Salts, and mix the whole for use.)				

These oils will be found very powerful in curing deep-seated strains in the fleshy parts of the body ; they will dissolve the coagulated lymph, which often remains in strains of long standing. They must be well rubbed on the part affected night and morning, as may be thought proper. After the pain, inflammation, and the effects of the oils are gone off, the parts frequently remain weak for a considerable time in these animals more than in others ; if so, the weakness may be removed by applying the following strengthening plaster.

## THE PLASTER.

Take Black Pitch	..	..	..	..	$\frac{1}{2}$ pound.
Burgundy Pitch	..	..	..	..	4 ounces.
Gum Plaster	..	..	..	..	2 "
Roborans Plaster	..	..	..	..	2 "

Melt it over a slow fire, and when dissolved take it off the fire, and when warm spread it over the part with a spatula, and immediately cover it over with short wool, or a flannel bandage if more proper for the situation. This will warm and strengthen the parts. If it be stuck on with wool, let it remain till it falls off, but if with flannel, cut the stitches in about a month after, and then let it take the same course.

## SECTION XXIX.

## CANCEROUS ULCERS.

THESE ulcers are more difficult to heal than any to which horned cattle are liable. They generally make their appearance in a hard livid tumour, seated in some of the glandular parts of the body: some of them are moveable, others more seated: some are inflamed and quickly break out, and discharge a thin and sometimes a thick yellow matter, the wounds frequently filling up with fungous flesh.

The cure greatly depends upon the particular parts of the glands where the ulcer is seated. There are some parts that will admit of total extirpation, which may be done with a suitable knife; or, if preferred, by cautery. Some persons attempt to remove every excrescence by means of caustic. The choice of these different methods must be left to the judgment of the operator, who will of course adopt that which is most convenient at the time of operating. After the wound has been thoroughly cleansed from all extraneous matter, let it be touched all over with lunar caustic, and afterwards dressed with the following mixture.

## THE MIXTURE.

Take Ægyptiacum	..	..	..	4 ounces.
Compound Tincture of Myrrh	..	..	..	2 "
Spirit of Turpentine	..	..	..	2 "
Sublimate	..	..	..	3 drachms.
Spirit of Salts	..	..	..	5 "

First dissolve the Sublimate in the Spirit of Salts, then add the other ingredients; keep it in a bottle for use.

Let the wound be dressed once a-day with small pledgets of tow or lint, dipped in this mixture; and if any superfluous flesh should appear, it must be kept down with the above caustic; as

wounds dressed with the preceding seldom fill up in the same manner as those dressed with digestives ; it may therefore be in some cases advisable, after the wound has been well cleansed, to use one part of the digestive ointment—(Section XXVI.)—and two parts of the above mixture, well mixed together on a slab with a spatula. The wound may be dressed once or twice a-day with this, spread on lint or tow.

• Purging medicines are sometimes advisable in cases of this kind, and may be administered once a-week for three or four weeks together.

#### THE PURGE.

Take Epsom or Glauber's Salts	..	..	1 pound.
Nitre, in powder	..	..	2 ounces.
Ginger, in powder	..	..	1 "

Mix for one dose, and give it in a quart of gruel.

By these means the great flux of humours will be carried off by evacuations, and the above medicines will act more powerfully on the wound. When these hard tumours, or schirrous swellings of the glands, first make their appearance, they may be removed by the following ointment.

#### THE OINTMENT.

Take Ungt. Hydrargyri Fortius (strong Mer-			
curial Ointment	..	..	4 ounces.
Cantharides	..	..	1 drachm.
Camphor	..	..	$\frac{1}{2}$ ounce.
Spirit of Turpentine	..	..	$1\frac{1}{2}$ "

Mix it well together, and keep it well tied down with bladder after using.

A sufficient quantity of this ointment should be rubbed on the parts affected once or twice a-day for eight or ten days; then leave off the dressing for a month, and if any substance remains after that time, the ointment may be repeated as before; or the following



## MIXTURE.

Take Iodine .. .. .	1 drachm.
Hog's Lard .. .. .	1 ounce.
Yellow Basilicon .. .. .	1 "

Mix for an ointment.

This must be rubbed on the part every morning for six days ; then leave off for a month or so ; and if the tumour be not dispersed in that time, repeat the dressing a second time as before.\* In this manner it may be repeated as often as found requisite. No danger is to be apprehended in the use of either of these, provided you prevent the animal from licking it.

## SECTION XXX.

## THE FOUL IN THE FEET.

HORNED cattle of all ages are liable to this complaint ; but cows of a gross habit of body suffer most from it. It generally makes its appearance between the claws or hoofs in the form of a hard crack, attended with considerable inflammation, and in a short time will discharge fetid and offensive matter : at other times it makes its appearance in the form of a large tumour upon the coronet, between the hair and the hoof, attended with violent pain and inflammation. The pain is often so great as to reduce them to mere skeletons. If this disease first makes its appearance between the claws, wash the parts clean from all dirt and filthiness ; when dry, take a pair of cow-hopples (such as are used for tying their legs at the time of milking), or a rope of the same thickness, and then chase the part affected between the claws as much as possible without injury ; afterwards dress the parts with a wood skewer dipped in two drachms of sublimate, and an ounce of either of the following acids mixed with it, viz. aquafortis, butter of antimony, or oil of vitriol, and let them dry one hour

after. This may be done for two or three days together ; but if the part swells and appears much inflamed, let it be well rubbed with the following

#### MIXTURE.

Take Mercurial Ointment .. ..	2 ounces.
Althæa Ointment .. ..	2 "
Camphor .. ..	6 drachms.
Spirit of Turpentine .. ..	2 ounces.

Dissolve the Camphor in the turpentine, then mix the whole.

If the tumour is likely to suppurate, apply the following poultice.

#### THE POULTICE.

Take Tar one pound ; melt it over a fire ; then add Linseed in powder half a pound ; mix, and when lukewarm apply it to the part affected.

The liniment and poultice must be repeated once a-day until the tumour is ripe to be opened with a lancet. Afterwards dress the wound with the following.

Take Ægyptiacum .. ..	2 ounces.
Compound Tincture of Myrrh ..	1 "
Spirit of Turpentine .. ..	1 "
Sublimate .. ..	2 drachms.
Spirit of Salts .. ..	2 "

Mix, and keep it in a bottle for use.

Or, if too strong, the sublimate may be omitted. When the foul appears to proceed from a superabundant flow of humours collected from different parts of the body, and settles in the foot, the cure may be accelerated by giving the beast once a-week, for two or three weeks, a purging drink as follows.

#### THE PURGING DRINK.

Take Epsom or Glauber's Salts .. ..	1 pound.
Nitre .. ..	1 ounce.
Emetic Tartar .. ..	1 drachm.

Mix for one dose.

## SECTION XXXI.

## TO DRY A COW OF HER MILK.

THIS is a subject with which most gentlemen graziers are well acquainted. It is frequently found necessary to dry cows of their milk at all times of the year, in order that they may be better fed for the shambles. Cows that give large quantities of milk, and that are of a gross habit of body, are more difficult to dry than others. Without great care and management these will be subject to the downfall of the udder, &c. ; or otherwise it may terminate in some inflammatory disease. Cows that are apt to milk themselves are difficult to dry : they should therefore be dried early in the spring whilst at dry meat. Others may be dried either in the pasture or elsewhere. Cows that are in the pasture and give a considerable quantity of milk, and are in good condition, ought to be fetched into a fold-yard the previous night, and from three to four quarts of blood taken from each of them. On the following morning give the drink as follows.

## No. 1.

Take Alum, in powder	..	..	..	8 ounces.
Bole-armenian	..	..	..	2 "

Mix, and put it in a pitcher ; then pour upon it one pint and a half of boiling ale ; afterwards add one pint of good vinegar, and give it lukewarm.

## No. 2.

Take Alum, in powder	..	..	..	8 ounces.
Turmeric powder	..	..	..	2 "
Bole-armenian	..	..	..	1 "

Pour a quart of boiling ale or smith's forge-water over it, and give it lukewarm.

The cow must be milked clean at the time these drinks are given, and two hours afterwards she may be turned out to pasture. Four days after, if her udder be hard and full, let her be fetched out of the pasture, milked clean, and the drink repeated as before.

As some cows give so much milk as to render them very difficult to dry, it is frequently found necessary to repeat the drink and milking every fourth day, for three or four times before they can be completely dried.

These are two excellent drinks, and will be found very powerful in drying up their milk.

## SECTION XXXII.

### ANGLE BERRIES.

THESE are cutaneous tumours growing out above the surface of the skin, and of different sizes, with a very disagreeable appearance. Young heifers, or cows having their first or second calves, are the most subject to them. These cutaneous tumours make their appearance on various parts of the body. Those upon the udder are not only disagreeable, but cause the cow to be very troublesome to milk. They rise from a small base, and hang in a pendulous form of different sizes.

The common method used for extirpating such excrescences is to fix a ligature round the base, and suffer them to rot off themselves. Others, after they have been well secured with a strong cord or twine, will cut them off with a sharp knife, and anoint the part with oil of vitriol. But the most ready and effectual way is to throw the animal down, and take hold of the angle berries at the base with a pair of broad flat bannacles (such as are used in farriery): then take a firing-iron, after it has been

sufficiently heated, and burn them off; touch the seared part all over with a skewer dipped in oil of vitriol or aquafortis: either of these will destroy the roots, and prevent them from growing again; but if they are attended to in time, before they come to their full growth, they may be removed by applying the following ointment.

#### THE OINTMENT.

Take Green Copperas	..	..	..	1 ounce.
Blue Vitriol	..	..	..	1 "
White Vitriol	..	..	..	1 "
Burnt Alum	..	..	..	1 "
Camphor	:	..	..	3 drachms,
(dissolved in Spirits of Wine)				
Hog's Lard	..	..	..	$\frac{1}{2}$ pound.

Mix them well together on a slab for use.

A small quantity of this ointment must be rubbed every night and morning on the angle berries, warts, or any excrescences that grow upon the udder or other part of the body. This ointment will gently eat them away without injuring any other part.

### SECTION XXXIII.

#### SORE TEATS.

SOME cows are more subject to sore teats than others; and they are liable to this complaint at all seasons of the year, more particularly those that have lately calved. If the teats are affected in the summer they often become ulcerated; and flies plague them to such a degree as to render them difficult to milk. It is a serious nuisance at the time of milking, as blood and corruption pass into the milk. The following ointment should be used, which will be found very superior for sore teats, &c.

Take Elder Ointment	..	..	..	2 ounces.
Althæa Ointment	..	..	..	2 ounces.
Gum Camphor	..	..	..	3 drachms.
Goulard's Extract of Lead	..			1 ounce.
Linseed Oil	..	..	..	1 ounce.

Mix for use.

OR THE FOLLOWING.

Take Elder Ointment	..	..	..	2 ounces.
Althæa Ointment	..	..		2 "
Bees' Wax	..	..	..	1½ "
Sugar of Lead, in powder	..			1 "
Alum, in powder	..	..	..	2 "

Melt the three first ingredients first; then add the sugar of lead and alum finely powdered, and stir the whole till nearly cold.

The Cow's teats to be well washed with hot water before using the ointment, and then let it be rubbed on every night and morning after milking until well.

## SECTION XXXIV.

### THE MANGE.

THIS disease is well known to most graziers. It is seated in the skin, and generally proceeds from scanty keep during the winter. It makes its appearance early in the spring, as soon as the warm weather begins to set in. The symptoms are as follow: The skin or hide appears fast on all parts of the body, and every time the beast rubs itself the hair comes off, and a thick white scurf of a shabby appearance is to be seen in a short time.

In the cure of this disease mercurial ointment cannot be used with safety among horned cattle, unless there is a possibility of preventing their licking themselves: but either of the following ointments may be used with safety for all diseases of this kind.

## THE OINTMENTS.

Take Hog's Lard .. .. 1 pound.  
 Spirit of Turpentine .. .. 4 ounces.  
 Put it in a pot that will hold twice the quantity;  
 then gradually add  
 Oil of Vitriol .. .. 2 "  
 Flower of Sulphur .. .. 4 "  
 Mix together for use.

Or the following may be used if considered more proper.

Take White Hellebore, in powder .. ..  $\frac{1}{2}$  pound.  
 Soft Soap .. .. 1 "  
 Hog's Lard .. .. 1 "  
 Spirit of Turpentine .. .. 1 pint.  
 Flower of Sulphur .. ..  $\frac{1}{2}$  pound.  
 Pearl Ashes .. .. 2 ounces.

Mix the whole together for an ointment.

All the infected parts must be well rubbed with this ointment every second or third day for three times. Let it be done in the heat of the sun if possible, or it must be dried in with a hot iron, held at a proper distance while it is rubbed on.

These medicines frequently cure at one dressing in slight cases; at the same time give the following drink.

## THE DRINK.

Take Crude Antimony, in powder .. ..  $\frac{1}{2}$  ounce.  
 Tartarized Antimony .. .. 1 drachm.  
 Flower of Sulphur .. .. 2 ounces.  
 Nitre, in powder .. .. 1 "  
 Ginger, in powder .. .. 1 "

Mix for one dose, and give it in a quart of warm ale.

This drink may be repeated every third day, for three times if necessary. It will be found to possess the required quality of promoting the animal secretions.

If cattle could be prevented from licking themselves for a few

hours, they might, if the case should be very obstinate, be treated in the same way as I have ordered for horses in the mange, as that would be sure to have the desired effect.

## SECTION XXXV.

### LICE IN CATTLE.

LICE in cattle, like the former disease, require but little description, as these vermin are visible to the eye; if not, by moving the hair they may be soon made to appear.

The cattle most subject to lice are those which, through bad keep and poverty, are reduced to a low state, so that nature is not able to cast off her old coat; in consequence of this an extra harbour is left for the vermin to accumulate in.

Different kinds of medicines have been applied for the destruction of these vermin. Mercurial ointment (such as is used for the scab in sheep) would prove most effectual, if it could be used with safety: but as beasts are so liable to lick themselves, it would endanger their lives by bringing on a salivation of the glands. It will therefore be better to omit its use, and to apply the following preparations.

Take Stavesacre, in fine powder	..	..	4 ounces.
Spirit of Turpentine	..	..	4 "
Oil of Vitriol	..	..	6 drachms.
Mix it gradually,			
Then add Whale Oil	..	..	4 ounces.
Hog's Lard	..	..	1 pound.

Mix the whole together for an ointment.

A sufficient quantity of this ointment may be rubbed on every part affected by the lice, and repeated a second time five or six



days after. Two dressings are generally sufficient to rid the animal of this kind of vermin.

If the practitioner thinks proper he may use the following.

Take Stavesacre, in powder .. .. .	$\frac{1}{2}$ pound.
Soft Soap .. .. .	$\frac{1}{2}$ "

Boil it in five quarts of urine until one is wasted. Wash all the parts of the body well, where lice are found, with this wash, and repeat it once in a day or two. Or the following.

Take Train Oil .. .. .	$1\frac{1}{2}$ pint.
Spirit of Turpentine .. .. .	8 ounces.
Spirit of Hartshorn .. .. .	2 "

Mix for use, and keep it well corked.

Let the parts where the vermin are be dressed once a-day with the above ; but before using either of these liquids let the vermin be well dressed with old urine or lie. A round brush, such as you oil shoes with, would be best to use in dressing the animal. When cattle are reduced to so low a state it will be necessary to give them a drink or two, such as follow.

Take Flower of Sulphur .. .. .	2 ounces.
Nitre .. .. .	1 "
Gentian Root, in powder .. .. .	1 "
Ginger, in powder .. .. .	1 "

Mix for one dose. Give it in warm ale or beer : let the ale or beer be hot when poured over the drink, and cover it down till warm.

## SECTION XXXVI.

### WARBLES.

THESE proceed from a fly, known by the name of gad fly, breeze, or ox fly, which punctures small holes in the backs of horned cattle, and there deposits its eggs. These being matured

by the heat of the animal's body a small tumour arises, containing a grub, and having a small hole in its centre to afford respiration to the insect, and also to cast out the superfluous matter, which, if confined, might soon produce a large abscess and destroy the grub. Country people frequently dislodge these creatures by pressing the finger and thumb on each side of the lump. The best way of destroying them is to pull off the scab that generally covers the mouth of the hole, and pour a few drops of spirit of turpentine into the orifice of the wound.

## SECTION XXXVII.

### TO MAKE A COW TAKE THE BULL.

It is sometimes necessary to promote this desire in a cow, as otherwise the most profitable time for making butter and cheese may be lost: but it is rarely wanted if the cow be healthful and in good condition; and it is much better when nature is permitted to perform her own course, but this cannot always be waited for. The following drink may therefore be given.

#### THE DRINK.

Take Pulvis Lyttæ	..	..	..	..	1½ drachm.
Capaicum, in powder	..	..	..	..	1 ounce.
Bay Berries	..	..	..	..	2 “
Cumin Seed, fresh powdered	..	..	..	..	2 “

Mix the whole together for one drink.

Give it in a quart of warm milk, at any time of the day, on a full stomach; and if convenient let the beast stand two hours afterwards without meat; then turn her into her pasture, or feed her as usual. If this drink has the desired effect, the cow will take the bull in the course of eight or ten days: if not, the drink

may be repeated, with the addition of half a drachm of pulvis lyttæ mixed in it. If she is a very large cow the quantity of lyttæ may be increased to two drachms and a half: but this is very rarely necessary. It will sometimes bring on strangury; when this is the case give the following drink.

THE DRINK.

Take Nitre, in powder	..	..	..	2 ounces.
Tincture of Opium	..	..	..	$\frac{1}{2}$ "
Glauber's Salts	..	..	..	2 "

Mix, and give it in a quart of linseed tea. This drink should be repeated if required.

SECTION XXXVIII.

BULL BURNT.

THIS local disease affects the sheath of the bull; the parts become foul and full of cancerous ulcers, which inflame the bull's yard and cause the sheath to swell. The most effectual way of curing this disease is to throw the bull on his back with his abdomen upwards. Then take a linen cloth and fold it round his yard, and gently draw it out of the sheath till you can see to examine all the ulcerated parts, which should be bathed and washed with the following lotion.

THE LOTION.

Take Camphorated Spirit of Wine	..	..	..	4 ounces.
Sugar of Lead	..	..	..	1 "
White Vitriol	..	..	..	2 "
Soft Water	..	..	..	1 quart.

Mix, and keep it in a bottle for use.

The bull should be dressed twice a-week with this lotion, and kept from bulling cows until well. Care must be taken every time he is dressed, that all the parts are properly washed or bathed

with the mixture. Or he may be dressed in the same manner with the following mixture, which is more powerful.

THE MIXTURE.

Take Sugar of Lead	..	..	..	1 ounce.
White Vitriol	..	..	..	1 “
Blue Vitriol	..	..	..	1 “
Boiling Water	..	..	..	1 quart.

Mix for use.

This is a powerful mixture; but it should not be used the first time of dressing; afterwards it may be used with safety. During the time of his getting better, it will be proper to give the bull the purging drink, and repeat it once a-week for three times.

THE PURGE.

Take Glauber's or Epsom Salts	..	..	1 pound.
Barbadoes Aloes	..	..	2 or 3 drachms.
Nitre	..	..	1 ounce.
Ginger, in powder	..	..	1 “

Mix for one drink, and give it in a quart of gruel.

The matrix or womb of a cow is sometimes affected by the bull, which causes the parts to inflame and swell, likewise to discharge a disagreeable ichor; and at the time of staling she appears to have considerable pain. All the parts that appear to be infected must be bathed with the weakest lotion; the other being too strong for a cow;—a linen rag may be soaked in the lotion, folded round the finger, and introduced into the womb; or some of the lotion may be injected with a syringe. A few dressings will in general be sufficient.

SECTION XXXIX.

PROPER TREATMENT OF COWS THAT SLINK OR SLIP  
THEIR CALVES.

ABORTION, or cows slipping their calves in an early period of gestation, is a great misfortune to the owner. It appears that

cows in the best condition are the most liable to this calamity. It is sometimes occasioned by accidents, which frequently happen to them during the summer. At other times it has appeared of an epidemical nature; several having slipped their calves in the course of a few days: in this case it seems to proceed from debility and relaxation of the generative parts.

Cows are the most liable to sink their calves towards the latter end of the year, while feeding on autumnal grass or on low marshy grounds. At other times it has proceeded from the smell of carrion, which has been exposed in the pasture, or too slightly covered with earth. The sense of smelling in horned cattle is very acute: they will sometimes, on a warm day, in an open pasture, collect in great numbers to a particular spot, where some dead carcass has been buried several years, and with their horns and feet tear up the ground in a surprising manner, at the same time making a horrid noise. Cows that are in danger of slipping or casting their young before the time of gestation, should be brought from the pasture over night, and from two to three quarts of blood taken from each beast, which ought to stand in an open yard till next morning; then give the following drink.

#### THE DRINK.

Take Alum, in powder	..	..	..	6 ounces.
Oak Bark, in powder	..	..	1	"

Mix for one drink, and pour one quart of boiling water over it and give it to the beast.

This drink should be repeated in seven or eight days. Some cows are constantly bulling every fortnight or three weeks during the summer. A better drink cannot be given to put a stop to this, and also to make her hold to the bull. The drink must be given to the cow two hours after bulling: it strengthens and braces the parts of generation; but if she is in good condition let two quarts of blood be taken from her.

## SECTION XL.

## THE NATURE AND PROPERTY OF BLOOD.

THIS liquor may be justly called the element, or life of animal nature, which is always in continual motion, circulating through the veins and arteries of all living animals. On a slight examination it may appear homogeneous, but it consists of very dissimilar parts. When blood is first taken from the animal it very soon loses its volatile part, which flies off in the form of vapour, and as the vapour is dissipated the blood congeals and becomes a trembling mass. The principal part of this coagulated mass is the crassamentum, which contains the red colour, and gives it to the other parts of the body ; there is also the serum or watery part of the blood, from which is formed the crust on its surface, after taken from the vein : in this serum, besides the albumen (which hardens like the white of an egg), there is a considerable portion of water ; likewise a small quantity of ropy mucus ; besides these there is a small portion of sea-salt, fine chalky earth, iron, fixed air, and oxygen ; to which may be added the elementary fire. By the joint co-operation of the whole, life is infused into all parts of the body.

It appears that the natural elements of the blood are the albumen and globules—the immediate matter of growth and nutrition ; the globules never pass the emunctories, except by violent exertion or disease ; the morbid, bilious, and other particles that are found in the circulating blood, are rather heterogeneous than the elementary part of it.

When the animal is in full health and vigour of constitution, the blood is mild and gelatinous, but by disease it is often rendered very acrid.

## SECTION XLI.

## BLEEDING.—ITS UTILITY, AND IN WHAT CASES NECESSARY.

BLEEDING, if properly employed, is productive of good effects; but it may do much injury if improperly resorted to. It is useful in checking the progress of inflammatory diseases. The following are the chief symptoms that indicate bleeding to be necessary; viz.

First, When animals in a thriving state rub themselves until they fetch the hair off, the spot being frequently covered with a dry scab; in this state not more than half the usual quantity should be taken away at one time.

Second, In all kinds of inflammatory diseases in which the eyes appear red or inflamed, and the veins puff up and seem considerably larger than common.

Third, In fevers, bruises, hurts, wounds on the head, strains in various parts, &c.

Fourth, In all other accidents that may occur to the animal, where there is reason to apprehend a stagnation of the blood.

The method of performing this operation is too well known to require any description.

The quantity of blood that it may be proper to take away at one time cannot be here determined, as it must depend on the condition, disease, and size of the animal. In many inflammatory diseases too much can scarcely be taken, provided the beast be not faint or likely to fall down. A strong beast will bear the loss of three or four quarts of blood without the least injury: large cattle, that are attacked with inflammatory fevers, will bear a larger quantity away at once than usual. It will, however, be better in these diseases not to take too large a quantity away at one time, but to repeat the bleeding occasionally. The animal should neither be suffered to drink cold water nor to graze in the field immediately after being bled: the former may chill the blood, and the latter may cause the orifice to bleed again.

If this operation be performed in the summer season, it will be better to fetch the cattle out of the pasture towards evening ;—bleed, and let them stand in the fold-yard all night, and next morning take them to their pasturage again.

## SECTION XLII.

### COW POX.

It appears from various authors that this disease was not noticed by any one before Doctor Jenner, who was the first man who attempted to convince the world, in a public manner, of its great utility in protecting the human race from that baneful disease the small pox. Vaccine inoculation has been introduced into the principal parts of Europe, the East and West Indies, and many other parts of the world. As a substitute for the small pox, it appears to have met with the approbation of the public : yet, like many other useful discoveries, it has had powerful opponents, and has still more to contend with.

Some persons form the erroneous idea that the grease in horses' heels is of the same nature as the cow pox ; but this is a great mistake, for the contrary may easily be proved. Some horses have the grease for years together, and are seldom free from it in winter or summer. The cow pox is a disease that gradually proceeds to maturation, and afterwards declines or dies away. It is now well known among the keepers of large dairies, and is indicated by the following symptoms. The eyes of the animal appear heavy and dull, their milky secretions are considerably lessened, frequently to more than one-half in a few days. The beast moans and wanders about alone, irregular pustules are seen on its nipples ; which, at their first appearance, are commonly of a palish blue, or rather of a livid colour, and are surrounded by



an erysipelatous inflammation. As soon as this disease takes place a cordial drink may be given, which is necessary to warm and stimulate the solids, and give fresh motion to the fluids, by which nature will be better able to repel the disease.

The following is the cordial drink to be administered.

Take Gentian Root, in powder	..	..	1 ounce.
Sulphate of Iron	..	..	3 drachms.
Ginger, in powder	..	..	1 ounce.
Nitre, in powder	..	..	1 "
Cumin Seed, fresh powdered	..	2	"

Mix for one drink, and give it in ale or beer.

If any feverish symptoms should appear, the body must be kept open by giving the following

#### PURGING DRINK.

Take Epsom or Glauber's Salts	..	..	1 pound.
Emetic Tartar	..	..	1 drachm.
Ginger, in powder	..	..	1 ounce.

Mix for one dose, and give it in a quart of gruel or water.

Should it not operate in the course of sixteen or twenty hours let one half be repeated night and morning until the desired effect is produced. The teats and udder may be well rubbed with the following ointment or the following lotion.

#### THE OINTMENT.

Take Althæa Ointment	..	..	2 ounces.
Elder Ointment	..	..	2 "
Sugar of Lead	..	..	$\frac{1}{2}$ "
Gum Camphor	..	..	2 drachms.

Mix for an ointment.

#### THE LOTION.

Take Muriate of Ammonia	..	..	$\frac{1}{2}$ ounce.
Spirit of Camphor	..	..	1 "
Tincture of Opium	..	..	$\frac{1}{2}$ "
Vinegar	..	..	$\frac{1}{2}$ pint.

Mix, and keep it in a bottle for use.

The teats to be first bathed with hot water ; then let the ointment or lotion be well rubbed in twice a day. The lotion is the most pleasant to use, and is very suitable for sore teats in general, from whatever cause the soreness may arise. There is nothing in either of these preparations the least injurious to the milk.

### SECTION XLIII.

#### WOOD-EVIL, MOOR-ILL, CLUE-BOUND, OR FARDEL-BOUND, AND PANTAS.

VARIOUS names, which are often improperly applied, are given by different authors to many diseases in neat cattle ; but as the diseases are known by the above terms to country people, it would be wrong in me to give others ; though it certainly would be a great convenience if half of them were expunged, and more rational ones substituted.

The wood-evil chiefly proceeds from debility, occasioned by taking cold when exposed to bleak winds in open pastures. This brings on pain and stiffness of the joints, which, if early attended to, may be removed by giving a few of the following drinks.

#### THE DRINK.

Take Diaphoretic Antimony	..	..	2 ounces.
Camphor, in powder	..	..	3 drachms.
Flower of Sulphur	..	..	1 ounce.
Nitre, in powder	..	..	1 "
Ginger, in powder	..	..	1 "

Mix for one dose, and give it in a quart of warm ale, and repeat it in a few days. But if this disease be of long standing, it will be more proper to treat the animal as for the joint fellon or rheumatism.

Moor-ill is a state of debility said to be occasioned by a want of fresh water; this may easily be remedied by removing the beast to a fresh pasture, where it is more plentiful, and by giving a few of the before-mentioned drinks for the wood-evil, clue-bound, or fardel-bound. The animal when in this state is disposed to be saped, or costive; the thin part of the excrement forces its way through the middle, or on one side of the more hardened part. This frequently takes place at the commencement of a fever, and requires speedy relief, otherwise the life of the animal may be in danger. Let the purging drink be given.

#### THE PURGING DRINK.

Take Glauber's or Epsom Salts	..	..	1 pound.
Emetic Tartar	..	..	1 drachm.
Nitre, in powder	..	..	1 ounce.
Barbadoes Aloes	..	..	3 drachms.
Ginger, in powder	..	..	$\frac{1}{2}$ ounce.

Mix for one dose, and pour over it three pints of boiling water, and give it when lukewarm. Repeat one half night and morning. Should it not operate in the space of sixteen or twenty hours, the beast may be restored to her former state and condition by giving her two or three of the following drinks.

#### THE DRINK.

Take Carbonate of Iron	..	..	..	1 ounce.
Gentian Root, in powder	..	..	..	1 ounce.
Nitre, in powder	..	..	..	1 "
Ginger, in powder	..	..	..	2 ounces.

Mix for one dose, and give it in a quart of warm ale, and repeat it in three or four days.

Pantas is another species of disease similar to the former, and requires the same treatment.

## SECTION XLIV.

ON THE DISEASES INCIDENT TO YOUNG CALVES, AND THE  
METHOD OF TREATING A COW AFTER CALVING.

AFTER the extraction of a calf proper care should be taken of the cow, in providing her a suitable place to lie down in ; and also to allow her the privilege of licking her calf, which not only makes her fond of it, but the friction of the tongue puts the young animal in motion, and will enable it to rise much sooner than it otherwise would. About a quart of the first milk should be taken from the cow before the calf is allowed to suck ; after which it may have access to the cow.

The milk for the first three or four days being of an opening and purging quality, will evacuate the bowels of the viscid matter called *meconii*, which is confined in the colon during gestation. If, therefore, this should not be able to perform the necessary evacuation, recourse must be had to suitable medicines, such as the following.

Take Castor Oil	..	..	..	1 ounce.
Salt of Tartar	..	..	..	$\frac{1}{2}$ drachm.
Ginger, in powder	..	..	..	1 "

Mix, and give it in half a pint of warm milk.

This drink may be repeated next day if the bowels are not sufficiently opened. It is always desirable to let the calf have free access to the cow as soon as it is able to stand ; and on the second day the calf may be tied in the corner of the hovel where the cow is ; and if she has more milk than it can take at one time, it will be requisite to milk a part from her before the young animal is let loose to her. This should be done two or three times a-day for two or three days together. Afterwards let the calf be taken away if the cow's udder be free from

kernels, or hard excrescent substances, which are found in the udder of most young cows after calving: otherwise it should be permitted to suck a day or two longer. The rubbing of the calf's head against the udder greatly assists in dispersing these excrescences, and preventing the downfall or an inflammation taking place. The diet and treatment of the cows at the time of parturition must be regulated according to the season of the year. If in the winter, or early in the spring, care should be taken to house them as soon as possible, and to give them mashies of scalded bran and oats twice or three times a-day. If in the summer, they require to be kept in the shade, so as to be protected from the sun in the day, and from the cold in the evening, and treated with warm water and mashies as above.

## SECTION XLV.

### THE METHOD OF TREATING THE CALF STRING AFTER EXTRACTION.

As soon as the calf has been taken from the cow and properly cleansed, either by the animal's licking it, or with a clean linen cloth, let the umbilical cord, or navel string, be properly secured with a ligature in the following manner.

Take a waxed thread of several thicknesses, and pass it several times round it, about two inches from the body, secure it fast; then take a pair of scissors and clip it off a little below the tied part. Care is always necessary in tying the thread, lest it cut the navel string, and cause an effusion of blood that may be difficult to stop, and endanger the life of the animal. When this happens the wound should be dressed as soon as possible with the following styptic mixture.

## STYPTIC MIXTURE.

Take Compound Tincture of Myrrh	..	2 ounces.
Fryar's Balsam	.. .. .	2 "
Wine Vinegar	.. .. .	$\frac{1}{2}$ pint.
Oil of Vitriol	.. .. .	$\frac{1}{2}$ ounce.
Ægyptiacum	.. .. .	2 "

Mix the whole together in a bottle, and keep it for use. Take a pledget of tow and dip it in the above mixture; then apply it to the part affected, and support it with a proper bandage round the body. This will in general put a stop to the bleeding in a short time; or, if thought more proper, the following poultice may be applied.

Take Linseed Meal	.. .. .	$\frac{1}{2}$ pound.
Blue Vitriol, in powder	.. .. .	$\frac{1}{2}$ ounce.
Alum, in powder	.. .. .	2 "

Mix it into a poultice with the preceding mixture.

This cataplasm must be spread thick on leather; then apply it to the navel, and support it with a proper bandage as before. If the part be likely to suppurate, let it be dressed with the following mixture.

## THE MIXTURE.

Take Spirit of Turpentine	.. .. .	2 ounces.
Spirit of Sal-ammoniac.	.. .. .	2 "
Linseed Oil	.. .. .	6 "

Mix it in a bottle for use. The swollen parts must be well rubbed with this mixture twice a-day, and the wound dressed with the digestive ointment—(Section xxvi. as there directed). It frequently happens that the young animal under these circumstances is so reduced by pain and the loss of blood, as to require bracing and strengthening medicine. The following will be found serviceable.

Take Oak Bark, in powder	.. .. .	3 drachma.
Ginger, in powder	.. .. .	2 "

Mix, and give it in half a pint of warm ale; or the following.

Take Gentian Root, in powder	..	..	2 drachms.
Rhubarb Root, in powder	..	..	$\frac{1}{2}$ "
Ginger, in powder	..	..	2 drachms.
Dover's Powder	..	..	1 scruple.

Mix, and give it as above.

Either of these drinks may be given once or twice a-day until the calf recovers its strength. By strict adherence to the above treatment and rules, life may be preserved in the most desperate cases.

## SECTION XLVI.

### DIARRHŒA, OR DYSENTERY.

YOUNG calves are subject to this disease at the age of from two to six weeks ;—it is chiefly brought on through change of diet. Some farmers' wives are so penurious that they will scarcely allow the subsistence which nature requires at so early an age, and for want of which a great number of calves die. The time of changing the diet of these young animals is the most difficult. Care should therefore be taken to change it but very little for the first fortnight, but allow it for the greatest part new milk ; afterwards bring it to porridge by degrees, or otherwise a scouring or dysentery may be expected, which will greatly weaken the calf, and if not checked in time will end in a complete dysentery.—The symptoms are—great weakness, loathing of its food, a continual purging, and every thing it takes turns acid and coagulates on the stomach. Towards the last stage of this disease the stools become bloody and fetid, a large quantity of the defensive mucus of the intestines is mixed with them ; after which a putrefaction or mortification may take place, which terminates in death. These disasters may be prevented if timely attended to, by proper management, and the following medicines.

Take Rhubarb, in powder	..	..	2 drachms.
Castor Oil	..	..	1 ounce.
Salt of Tartar	..	..	1 drachm.

Mix for one dose, and give it in a pint of warm milk.

This drink will gently purge and evacuate the stomach and bowels and remove the crudities which they are loaded with in cases of this kind. The day after giving the above drink, let the following powders be given according to directions.

#### THE POWDERS.

Take Prepared Chalk	..	..	6 ounces.
Armenian-bole	..	..	2 "
Bone Burnt in the fire till white	..	2	"
Ginger, fresh powdered	..	..	2 "
Gum Arabic, in powder	..	..	1 "
Pomegranate, in fine powder	..	2	"
Dover's Powder	..	..	1 "

Mix the whole well together. Take one large spoonful of these powders, mix it in half a pint of new milk, and give it to the calf before it is fed night and morning, as long as the purging continues. These powders will be found a good absorbent, and frequently to check and cure the disease. Calves that are attacked with this disease, at the age of from four to six weeks, may have the castor oil increased to two ounces. The powders may also be doubled. By increasing the quantity every dose may be made suitable to the age of the calf. In cases of long continuance there is often a continual motion to dung, which may be properly called tenesmus. The pain in this case appears to be limited to the rectum, and may be speedily removed by administering the following clyster.

#### THE CLYSTER.

Take Linseed two ounces, boil it in a pint and a half of Water, strain and add Prepared Chalk one ounce; Tincture of Opium two drachms; Olive Oil one ounce.

Mix all together while warm, and inject it up the rectum, and prevent it from coming back again for a few minutes.



This clyster will be found to expel the acrid and slimy humours adhering to the coats of the rectum; if found necessary it may be repeated once a-day; should the disease continue obstinate a tea-spoonful of laudanum can be added to each dose of the powders.

## SECTION XLVII.

### COSTIVENESS IN YOUNG CALVES.

THE costive habit of some calves may take place at the age of four or five days; but not in general until the animal is put to dry meat; which may be reckoned at or about the age of ten weeks. In every stage of costiveness the animal will be liable to much danger if it is not removed.

Horned cattle, whether young or old, when labouring under any internal disease are liable to inflammatory fevers and to be costive; and if purgative medicines are not administered in time there is often but little hope of recovery. Neat cattle of all others verge most rapidly to a state of dissolution when suffering under any inflammatory disease.—(See Section xx. on purging medicines.)

In order to cure diseases it is requisite to be well acquainted with their nature, and the constitution of the animal, together with a proper knowledge of the quality and quantity of every medicine necessary to be given in each disease, for the purpose of obtaining the desired effect. If the purgative dose be too small, it will generally increase the disease; and if too large, it will be liable to reduce the animal to a low and weak state. A proper quantity therefore to produce the desired effect is the object to be sought for; and of this, I venture to hope long experience has given me a competent knowledge.

The following drink is suitable for a calf six weeks old.

## THE DRINK.

Take Glauber's Salts	..	..	..	3 ounces.
Ginger, in powder	..	..		3 drachms.
Anise Seed, fresh powdered	..	..		1 ounce.

The following may be given to one about eight weeks old.

Take Glauber's Salts	..	..	..	4 ounces.
Rhubarb, in powder	..	..		2 drachms.
Ginger, in powder	..	..	..	$\frac{1}{2}$ ounce.
Cumin Seed, fresh powdered	..			2 "

Put the whole into a pitcher, and pour over it a pint of boiling water; cover it down, and when lukewarm give the drink. Or, if thought proper, the following may be given, especially in inflammatory cases.

Take Castor Oil	..	..	..	4 ounces.
Rhubarb in powder	..	..	..	2 drachms.
Salt of Tartar	..	..	..	1 "
Ginger, in powder	..	..	..	$\frac{1}{2}$ ounce,
Cumin Seed, fresh powdered	..	..		1 "

To be given with a pint of warm gruel.

Either of these drinks may be repeated once a-day until it produce the desired effect; by increasing the castor oil or Glauber's salts, the drink may be applicable to every age. The great utility of purging medicines consists in carrying off those crudities which so frequently accumulate in the stomach and intestines of young calves, and produce many fatal diseases, as is quite obvious to those who have the management of young cattle. It will be necessary after purging to introduce a cordial drink or two, as it not only nourishes and heals the parts, but stimulates them to a fresh tone, and produces a healthy action. It will also be found of great use in removing flatulency from the stomach and intestines, and preserving health to these young animals.

Take Anise Seed, fresh powdered	..	..	1 ounce.
Cumin Seed, fresh powdered	..	1	"
Carraway Seeds, fresh powdered	..	1	"
Ginger, in powder	..	1	"
Sulphate of Iron	..	3	drachms.

Put the whole into a pitcher, and pour over it a pint of boiling ale; cover it down until lukewarm, and then give it. This will be found an excellent drink to remove indisposition; it will strengthen the stomach and promote an appetite.

## SECTION XLVIII.

### THE HOOSE IN CALVES.

THIS disease generally attacks young calves during the first year, and generally seizes them while at grass in the summer. In some dry summers it has carried off great numbers, to the serious loss of the owners. This disorder is frequently, if not in general, occasioned by worms, that lie in or near the gullet; their continual tickling motion, causing the animal to be almost in a constant state of hoosing or coughing; by which indigestion is so much impaired as to render the chewing of the cud almost impracticable; and if proper medicines are not administered, they languish and pine away. These evils may be prevented with care and management.—The following medicines will be found effectual in destroying this kind of vermin.

Take Wormwood	..	..	..	2 ounces.
Tansy	..	..	..	2 "
Savin	..	..	..	2 "
India pink	..	..	..	1 "

Cut and bruise them small, and put them into a pitcher; then pour over them a quart of boiling water; cover them down, and let them stand in a warm place till next morning. Strain the

liquor through a cloth, and add to it ginger, in powder, half an ounce; linseed oil, one ounce; turpentine, half an ounce; mix and give it lukewarm.

The calf must fast two hours before and after having the drink; then it may be turned into the pasture again. It will be necessary to repeat the drink every other day;—or the following.

Take Gum Asafetida	..	..	..	4 ounces.
Bruise, and dissolve in one quart of Vinegar,				
Then add Salt of Tartar	..	..	..	2 “
Spirit of Turpentine	..	..	..	3 “
Tincture of Opium	..	..	..	2 “
Linseed Oil	..	..	..	4 “

Mix the whole together in a bottle, and keep it well corked for use. Let two ounces of this mixture, which is rather more than a wineglassful, be given every morning, and two teaspoonfuls be injected up the nostrils. A wineglassful is the dose calculated for a calf of the age of three months, and from that to six; if older, more must be given in proportion to age; if younger, less will suffice. These medicines will increase the appetite, promote digestion, and destroy vermin from the larynx.

A simple solution of asafetida is very efficacious in curing the hoose in calves; in fact, in some of the principal counties in Wales, farmers seldom use any other medicine for the hoose. The method of preparation and administering is as follows.

Take Gum Asafetida	..	..	..	2 ounces.
Vinegar	..	..	..	1 pint.

Bruise the asafetida and put it into a bottle with the vinegar; let it stand by the fire until dissolved, but shake it frequently; or it would be better if it was previously boiled, and then bottle it. Let a wineglassful of this preparation be given fasting every morning, and a tablespoonful injected up the nostrils twice

a-day with a syringe. One person should hold the calf's head in a rising position, while another person injects the solution with a syringe. It will be necessary to hold up the calf's head for a few minutes afterwards to keep it from being rejected.

I have also recommended a teaspoonful of spirit of turpentine to be thrown up each nostril with a syringe, which I have known in the county of Hereford to perform many cures without the aid of other medicines.

This disease is, as I have before stated, attended with very serious loss to many farmers during some dry summers. I have therefore felt it my duty, as in other cases requiring extra preparations and treatment, to give a selection of such formulas as are known from experience to be effectual.

## SECTION XLIX.

OBSERVATIONS ON DIVIDING THE DIFFERENT DRINKS CONTAINED IN THIS TREATISE, IN A PROPER MANNER SUITABLE FOR HORNED CATTLE, FROM THE AGE OF ONE YEAR AND UPWARDS.

MY readers are particularly requested to bear in mind that in the preceding pages the drinks are chiefly calculated for full grown animals. It will therefore be necessary for those persons who have the care of cattle, to have a proper knowledge of the method commonly used in dividing each drink suitable for their different ages. Those of a cathartic nature first claim our attention, as they are the most necessary for every person to make himself acquainted with.

If too large a dose be given the animal's life will be endangered, and if too small a quantity be given, the symptoms will be increased; it is thus obvious that either extreme may lead to

evil consequences, if not to the death of the animal. It is necessary that those persons who are in the habit of prescribing medicines for horned cattle should make themselves well acquainted with the nature and power of the animal frame, the symptoms of all diseases, and with the quality and operative powers of the medicines usually prescribed. Without this proficiency our best efforts will be of little avail.

The following method, if strictly attended to, will lead to a proper division of those drinks, whose operative powers are the most considerable.—First, for a heifer or steer of one year old, and from one to a year and a half, one half of any of the following purging drinks will be sufficient.

Section I. p. 88 ; Section IV. p. 96, 97, 98 ; Section VI. p. 104 ; Section VII. p. 107 ; Section VIII. p. 108, 109 ; Section IX. p. 115, 116 ; Section X. p. 118 ; Section XI. p. 120 ; Section XII. p. 123, 124 ; Section XIII. p. 126, 127 ; Section XV. p. 131, 132, 133 ; Section XXI. p. 144.

Second, for such as are from one year and a half to two years and a half, three parts out of four may be given. By this method every drink may be divided suitable for every age, size, and constitution. The above rule will also serve to regulate the other drinks in this Treatise for Horses and Horned Cattle.

END OF PART THE SECOND.



## PART THE THIRD.

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# ON SHEEP AND LAMBS.

### SECTION I.

#### THE LAMBING SEASON.

THE lambing season depends wholly on the time when the ram is put to the ewes. It is generally calculated that they should bring forth their young towards the middle of January or March; this is an inclement season for the ewe and lamb, especially if the former has been kept badly for some time previous to yearning. The consequence naturally to be expected on this occasion, must be a great loss amongst both ewes and their offspring. If the ewe has not sufficient support for herself, the lamb will be weakly at the time it is brought forth. It is therefore indispensable that sheep-breeders should pay every attention to these animals that nature and the season may require. For some time before yearning they should be supplied with plenty of food, in order that nature may provide for her offspring at the required time. If proper attention be paid to



these observations, the health and strength of the animals will be preserved, by which they will be enabled to go through the difficulty of parturition. Further, every farmer or grazier, who is in the practice of bleeding sheep, should be provided with a suitable fold-yard for the purpose. It may consist of a small plot of ground, protected from the north-east and westerly winds, and a fire-place with other conveniences in it for the purpose. Thus, the shepherd will be the better able to attend them all hours of the night to give assistance if required, and to take proper care of them. By attending to these observations the lives of many will be saved. The period for gestation in sheep is from twenty weeks to one hundred and fifty days; ewes will breed twice a-year, and may even be made to breed three times a-year, if they are kept in high order and not suffered to nurse the lambs. I have known two or three that have taken the ram this winter since lambing, and one within eight days after lambing, though the lamb was running at her side. Whether the copulation will be productive remains to be seen; if it should (and I have no reason to think it will not), the lambs will fall in August; of course the ewes may take the ram in October, so as to lamb again in March, which would be three times in the course of the year. This, however, is a practice by no means to be recommended, as I think it would injure both ewes and lambs, and deteriorate the stock.

In most breeds of sheep single lambs are more common than a greater number; but in some counties, as in Dorsetshire, double lambs are nearly as common as single. The Friesland and Tees-Water sheep, which are of the large long-wool species, if well kept, bring from two to five lambs at a birth, and that sometimes twice in the year. It has been seen in Guilderland, that five ewes have had in one year five-and-twenty lambs. This may seem to many incredible; but it is a fact that they have generally twice a-year two, and sometimes five lambs at a time. Cully gives the following instance of fecundity in a Tees-Water ewe: "When two years old she brought four lambs, then five,

then two—then five, then two; the first nine within eleven months.” The highest keeping is however necessary to cause this fecundity. It frequently happens during the lambing season that ewes are severely handled in consequence of the largeness of the lamb, or from its being in a wrong position, so as to injure various parts of the uterus. The following preparations will answer for the injured parts.

#### RECIPE NO. 1.

Take Venice Turpentine	..	..	..	2 ounces.
Barbadoes Tar	..	..	..	2 “
Spirit of Turpentine	..	..	..	4 “
Mix these well together, and add				
Ægyptiacum	..	..	..	$\frac{1}{2}$ “
Compound Tincture of Myrrh	..	..	..	4 “
Oil of Vitriol	..	..	..	1 “

Mix the whole well together for use. Or,

#### RECIPE NO. 2.

Take Spirit of Wine	...	..	..	2 ounces.
Oil of Vitriol	..	..	..	1 “
Spirit of Turpentine..	..	..	..	1 “
Compound Tincture of Myrrh	..	..	..	2 “
Vinegar	..	..	..	1 pint.

Mix all well together in a bottle for use. Or,

#### RECIPE NO. 3.

Take Linseed Oil	..	..	..	$\frac{1}{2}$ pint.
Vinegar	..	..	..	$\frac{1}{2}$ “
Turpentine	..	..	..	$\frac{1}{2}$ “
Compound Tincture of Myrrh	..	..	..	4 ounces.
Spirit of Wine	..	..	..	2 “
Oil of Vitriol	..	..	..	1 “
Barbadoes Tar	..	..	..	2 “

Mix it well together in a bottle for use.

Either of the above formulas may be used, whichever the practitioner may deem best. When these mixtures are used let

them be well shaken, and from one to two tablespoonfuls may be conveyed into the matrix or womb either with a hand or spoon : they warm and stimulate the parts affected, and will effectually prevent or cure putrefaction or mortification in these parts, as in other fresh wounds. The following drink will be found of great service, if given to those ewes which are injured by a difficult parturition.

Take Fryar's Balsam	..	..	..	1 ounce.
Tincture of Opium	..	..	..	1 drachm.

Mix, and give it in three ounces of warm ale. Or the following.

Take Peruvian Bark	..	..	..	2 drachms.
Ginger, in powder	..	..		1 "
Brandy, or Gin	..	..	..	2 tablespoonfuls.

Mix it in half a pint of gruel, and give it lukewarm. It is frequently necessary to repeat the drink once or twice a-day if the animal has received much injury, or if it has been reduced by poverty, scanty or bad living, for a long time before lambing commences.

The gruel that is necessary to be given to ewes at the time of lambing should be made as follows.

Take Linseed, fresh powdered (not meal)	..	1 pound.
Oatmeal,	.. .. .	2 "

Mix it together, and when it is wanted take a sufficient quantity of the powder and water ; boil them together in gruel, in the same manner as if made of oatmeal alone ; a tablespoonful of gin or brandy may be added, and a similar quantity of sugar. This will give plenty of support to these animals, as well as strengthen and heal their insides ; from half a pint to a pint of this gruel may be given at one time, and repeated twice a-day if necessary. If the ewe be deficient in her milk (which very often happens

at the time of lambing for want of better support), let the following drink be given, which will be found to greatly assist those secretions.

#### THE DRINK.

Take Anise Seed, fresh powdered	..	..	1	drachm.
Cumin Seed, fresh powdered	..	..	2	"
Carraway Seeds, fresh powdered	..	..	1	"
Fennel Seed	..	..	1	"
Grains of Paradise	..	..	1	"

Mix and give it in half a pint of warm gruel. Such persons as may find it necessary to give their sheep the above drink, would find it more convenient to have a few ounces of each seed powdered and mixed together; and if not used in a few days to put them in a wide-mouthed bottle and keep them corked down. Six or eight drachms of these powders may be mixed and given as above, at any time. By this method the whole virtue of the seeds will be preserved. This drink acts as a cordial, and powerfully promotes the milky secretions, and warms and stimulates the stomach and intestines.

## SECTION II.

### ON THE DISEASES OF YOUNG LAMBS.

Young lambs are subject to a variety of diseases, either from insufficient keep, or from a redundancy of milk. If they proceed from the former, support must be given them, either by allowing them to suck other ewes, or by giving them cows' milk. When the ewe has too much milk it is apt to coagulate and form into a substance in the stomach, by which a number of the best lambs are carried off. At other times the acid produced from the coagulated milk in the stomach brings on a continual purg-

ing, which, if not prevented, will in a short time carry off many of the best lambs. This is a common complaint among lambs in the spring of the year.

**Pinning.**—Lambs, soon after the birth, are subject to a disorder called pinning. It consists in the excrements being so glutinous as to fix the tail to the vent, which, if neglected, will often kill the lamb. The remedy is to wash them clean; and to rub the buttocks and tail with dry clay, which will prevent any further adhesion.

The following drink will be found useful in dissolving the coagulated matter in the stomach, correcting the acid, and in carrying off the disease by stool.

#### THE DRINK.

Take Salt of Tartar	..	..	..	..	1 drachm.
Castor Oil	..	..	..	..	1 tablespoonful.
Ginger, fresh powdered	..	..	..	..	2 drachms.
Sugar	..	..	..	..	1 tablespoonful.

Mix, and give it in a pint of warm gruel.

This drink may be repeated once a-day for two or three times, until a proper passage is effected. The quantity of castor oil may be increased or diminished according to the size and strength of the lamb. A strong lamb, six or eight months old, will require a tablespoonful and a half; but if only two or three days old, half a tablespoonful will be sufficient. If the 'disease' be permitted to continue for some time, and no endeavour made to give relief, the diarrhœa becomes more obstinate, and the stools are attended with a copious ejection of the mucus of the intestines, together with a griping pain, while the animal daily pines away.

After the bowels have been sufficiently evacuated by administering the purging drink, the following powders will be found to correct the acid in the first passage and to stop the purging.

## THE POWDERS.

Take Rhubarb, in powder .. ..	$\frac{1}{2}$ ounce.
Prepared Chalk .. ..	4 "
Prepared Oyster-shells .. ..	4 "
Anise Seed, fresh powdered ..	1 "
Carraway Seeds, fresh powdered ..	1 "
Ginger, fresh powdered .. ..	1 "

Mix the whole together in a mortar. One small tablespoonful of these powders must be mixed in a little sweetened gruel, and given to each lamb once a-day. If the purging does not abate in two or three days, ten drops of tincture of opium may be added to each dose of the powders; or you may give the following

Take Calcined Sulphate of Iron .. ..	2 ounces.
Ginger, in powder .. ..	1 "
Dover's powder .. ..	$\frac{1}{2}$ "
Prepared Chalk .. ..	6 "

Mix together in a mortar, and let from half a small tablespoonful to a full one be given once a-day in gruel as above.

Pinning and scouring in many instances arise from keeping the lambs too cold; sometimes from the quality of the cows' milk. They should, with the parent ewes, be put into a warm, dry, sheltered cot. The ewes should have nutritious food, such as oats, old corn, and wheat bread; care should be taken that they nurse their lambs daily, for it frequently happens that this complaint is aggravated by a penury of milk: in this case the deficiency should be supplied by cows' milk boiled, or by letting the lamb suck a cow. By attending to this method of treatment a cure may soon be expected.

## SECTION III.

## RED WATER.

THIS disease is of an inflammatory kind, and mostly prevails at the latter end of the year, or during winter, among sheep feeding on turnips or succulent grass. Sheep which are in the best condition are generally first attacked by it, and if immediate relief be not had, they often die in twenty or thirty hours, or less. The death of those which I have seen opened has on examination been found to have arisen from inflammation, sometimes in the stomach, intestines, kidneys, or neck of the bladder. Sometimes the intestines become loaded with sand or gravel, while the sheep are feeding on turnips; by which the inflammation is increased. Under such circumstances no time must be lost in putting a stop to so destructive a disease. The following medicine will be found adapted for the disease.

Take Epsom Salts .. .. .	12 ounces.
Nitre, in powder .. .. .	8 "
Spirit of Turpentine .. .. .	8 "
Tincture of Fox-glove .. .. .	3 "
Boiling Water .. .. .	3 quarts.

First dissolve the Nitre and Epsom Salts in the boiling Water, and when cold add the Turpentine and Tincture of Fox-glove, and shake the whole well together. The dose is from three to four tablespoonfuls.

When this medicine is intended to be given to a number of sheep they must be taken from the turnips, or whatever they may be feeding on, and put into a pen or fold-yard, for two hours before it is given. A small horn should then be provided that will hold the quantity proper for each sheep and no more. Let the medicine be well shaken each time it is poured into the horn. This method of giving drinks to sheep will be

found very advantageous, when many require to have the medicine administered at the same time. They must be kept from food two hours after the medicine is given, either in a fold-yard or a pen ; after which they may return to their pasture as usual. If this disease should be so severe that several die daily, it will be requisite to repeat the drink every second or third day for three or four times, or more if thought proper. This medicine will be found very powerful in all inflammatory diseases, and in removing the obstructions of the kidneys, uterus, bladder, or other parts of the body, while feeding on succulent grass, turnips, &c.

#### SECTION IV.

##### THE ROT.

THIS disorder has been more fatal to sheep than any other ; and having at various times carried off vast numbers, it has occupied the attention of the most learned, who have favoured the public with their opinions. The symptoms of this fatal disease cannot be more accurately stated than as follows :—

When in warm, sultry, and rainy weather, sheep that are grazing on low and moist lands feed rapidly, and some of them die suddenly, there is reason to fear they have contracted the rot. This suspicion will be increased if a few weeks afterwards the sheep begin to shrink, and become flaccid in their loins. By a pressure about the hips at this time a crackling is sometimes perceptible. Now or soon afterwards the countenance looks pale, and upon parting the fleece the skin is found to have changed its vermillion tint for a pale red ; and the wool is easily separated from the pelt.

As the disorder advances the skin becomes dappled with yellow or black spots. About this time the sheep lose their lustre, and become white and pearly, from the red vessels of the



tunica adnata and eyelids being contracted, or entirely obliterated. To this succeeds debility and emaciation, which increase continually till the sheep die; or else ascites, or perhaps general dropsy, supervenes before the fatal termination.

These symptoms are rendered more severe by an obstinate purging, which makes its appearance at an uncertain period of the disorder. In the progress of the complaint sheep become what the graziers call chокkered; that is, affected with a swelling under the throat.

In five or six days after contracting the rot the thin edge of the small lobe of the liver becomes of a transparent white, or bluish colour, and this spreads along the lower and upper sides, according to the severity of the complaint. Sometimes it does not extend an inch from the margin. In severe cases the whole peritoneum investing the liver is diseased; and then it commonly assumes an opaque colour, interspersed with dark red lines or patches.

The upper part of the liver is sometimes speckled like the body of a toad, to which it is said to bear a striking resemblance round the ductus communis choledochus and hepatic vessels; jelly-like matter is deposited, which varies according to the severity of the attack, from a tablespoonful, or less, to five or six times that quantity. Upon boiling, the liver loses its firmness, and separates into small pieces in the water, or remains soft and flaccid. Several graziers and butchers, with whom I have conversed at different times, having observed that sheep are much disposed to feed during the first three or four weeks after being tainted, omit no opportunity of producing it to increase their profits.

When the first stage is over, flakes begin to appear in the pori biliariū, the ductus communis choledochus, and in the gall-bladder. At first these creatures are small, but as the disease advances they increase; and, before death, are often very numerous. In the last stage of this complaint they are sometimes to be found in the stomach as well as the intestines and liver. This,

like the visceral disorders of the human body, may terminate in resolution, effusion, suppuration, or schirrous. First, the complaint is said to terminate in resolution, when the inflammatory action goes off without destroying the state and texture of the parts.

However, I am strongly inclined to believe that every considerable inflammation in the human body, and in other animals, although it ends in resolution, leaves behind it some remains, which may be discovered by an experienced anatomist. When the vessels are thrown into inflammatory action for a few days only, effusion commonly takes place, and the coats become thicker and assume a buff colour. These changes in the sanguinary system often continue through life, and lay the foundation of many chronic and incurable diseases. Sheep that recover from the rot exhibit very different appearances after death, according to the severity of the attack; but the taint is seldom or never entirely removed.

Secondly, When sheep die suddenly in the first stage of the disorder, an effusion of serum or of wheyish-coloured fluid may be commonly discovered in the cavity of the abdomen, and then the peritoneum surrounding the liver is generally covered with a membrane or a coat of coagulated lymph. This form of the rot has frequently been confounded with the red water, though it differs from the latter disorder in the colour of the effused fluid being much less disposed to putrefaction, and in several other particulars.

Thirdly, Abscesses in the liver exhibit another termination of the malady. They are seldom sufficient to cause immediate death; but in consequence of the absorption of purulent matter from them, the sheep frequently waste away and die hectic or dropsical. When the collections are small, sheep will recover sufficiently to bear lambs for several seasons, and afterwards become good mutton.

Fourthly, The most common termination is in schirra, or what is called by some, knots on the liver. Sometimes the

whole substance of this important viscus is so full of small roundish lumps or schirrous bodies as to render it difficult to find any sound part in it. The first attack is unfortunately of so very insidious a nature that the disease is scarcely observable before the animal is seen to have lost flesh. In this advanced stage it is said to labour under the rot. The first stage of the disorder might have been prevented if the disease in its first attack had been known. The following recipes will be found highly beneficial.

Take Nitre, in powder	..	..	..	6 ounces.
Ginger, fresh powdered	..	..		4 "
Colcothar of Vitriol	..	..	..	3 "
Gentian Root, fresh powdered	..	..		2 "
Common Salt	..	..	..	4 pounds.
Boiling Water	..	..	..	3 gallons.

Pour the boiling water over the ingredients, stir them, and when lukewarm add to every quart, by measure, three ounces of spirit of turpentine, and half an ounce of tincture of fox-glove, and bottle it for use.

This medicine should be put in bottles of one or two quarts, each, which will render it more convenient to be given, as it can be shaken at the time of being administered so as to prevent the turpentine from settling at the mouth of the bottles.

The following directions must be strictly adhered to. Keep the infected sheep from food all night; on the following morning give to each sheep two ounces of the above mixture, remembering to shake the bottle well at the moment of pouring it out. To those that are weak and much reduced by disease, one ounce or one ounce and a half may be sufficient for a dose. Keep them from food for three or four hours after giving the medicine, and then turn them into a dry pasture. It will be necessary to repeat the medicine every third day for three or four times, or oftener if required, observing the above rules. But when only half the quantity has been administered, it will be proper to repeat it every second day for six times.

## ANOTHER RECIPE.

Take Gum Asafœtida	..	..	..	2 ounces.
Calcined Sulphate of Iron	..	..	..	2 "
Nitre, in powder	..	..	..	4 "
Strong Vinegar	..	..	..	2 quarts.

Dissolve in a gentle heat; then add boiling water three quarts, and common salt two pounds, and to each quart three ounces of spirit of turpentine, and let two ounces of it be given every or every other morning for two or three mornings: then wait for a few days and commence again if required, bearing in mind that you must strictly attend to the preceding directions. I have prepared the preceding medicines for many of the principal gentlemen graziers in the county of Hereford, and elsewhere, and with the most decided success, as the sheep have afterwards been fed for the shambles.

## SECTION V.

## PELT ROT.

PELT ROT is often mistaken for the scab, but is in fact a different and less dangerous disease: in this the wool will fall off and leave the sheep nearly naked; but it is attended with no soreness, though the skin will be covered with a white crust from which the wool has dropped. It generally arises from hard keeping, frequent exposure to cold, wet weather, and in fact the animal often dies in severe weather from the loss of its wool. The remedy is full feeding, a warm stall, and anointing the part night and morning with the following.

Take Common Tar	..	..	..	..	$\frac{1}{2}$ pound.
Coarse Oil	..	..	..	..	1 pint.
Spirit of Turpentine	..	..	..	..	1 ounce.

Mix, and keep it in a proper pot for use.

## SECTION VI.\*

## THE SCAB.

THE Scab is a disease very common in most countries, but more so in Leicestershire, Lincolnshire, and the Principality of Wales. This disease is contagious, for if one sheep be infected with it, it will quickly communicate itself to the rest of the flock; and can seldom be eradicated without dressing the principal or whole of the flock.

Too much caution cannot be used by the grazier in selecting his stock from other districts, lest any of them should be infected with this disease. The scab requires but little description, being so well known to most persons who are accustomed to the management of sheep. Nevertheless I shall make the following remarks, knowing that this disease is a dreadful scourge to neglected sheep, and attended with great trouble, expense, and serious loss to the owners. Persons in counties where only small flocks of sheep are kept, have but little idea of the many severe diseases to which sheep are subject in the districts above mentioned. In some parts of Wales individuals have lost from a flock of twenty-five thousand, upwards of five thousand from the scab and severity of the weather in the winter season. This disease is first discovered by the animals' rubbing themselves against every post, gate, bank, or any other convenient place suitable for the purpose, and they are frequently seen to pull off the wool with their mouth.

As soon as this is observed, or when loose locks of wool appear to rise on their backs and shoulders, they should be examined, the wool taken out, and a mixture of spirit of turpentine and hog's fat rubbed on the place. If this be neglected for some time, and the disorder increases, the skin will feel hot and hard to the hand; and if longer neglected the wool will fall off

in large quantities, and the scab be converted into a sore, from which a small quantity of matter will ooze and clot the lower part of the wool; and if altogether left to itself the whole fleece will drop off and the sheep pine away; but they will generally, in a certain degree, recover from the first attack when they get to grass; they will however be very liable to take the disease again the next winter, and then it will prove serious. They may be cured by the following treatment, in the course of a week or ten days. First, separate the sheep—(for the disease is very infectious)—then cut off the wool as far as the skin feels hard to the finger; the scab must then be washed with soap-suds and rubbed hard with a shoe-brush, so as to cleanse and break the scab. Always keep a decoction of tobacco prepared, by pouring six quarts of boiling water over half a pound of tobacco; cover it down and let it infuse all night; then strain, and add to the tobacco two quarts more of water, and boil it for an hour gently, and press out the decoction and add it to the other. By the above method you will obtain the active properties of the tobacco; to which add, by measure, one-third of the lie of wood-ashes, as much hog's lard as will be dissolved by the lie; a small quantity of tar from the tar-bucket, which contains grease, and about one-eighth of the whole, by measure, of spirit of turpentine. This liquor should be rubbed upon the part infected and spread a little distance round it. After three washings, with an interval of three days, I have never known this to fail, when the disease has only been partial. By attention it may always be prevented from attaining so great a degree of malignity as to suffer the sheep to lose more than eight or nine inches square of its wool. I cannot say whether it would cure a sheep infected so far as to lose half its fleece, in which state I have seen many flocks. When the case is so bad as this, I think it would be proper to use the following remedies, which will cure in the most obstinate cases.

Take Irish Roll, or Leaf Tobacco	.. 1 pound.
White Hellebore Root, bruised	.. 1 "

Put it in a large tin or stone bottle, pour over it four gallons of boiling soft water, keep it well corked and place it by the fire-side for a week, shaking it two or three times daily; then strain it off, and add to the remains of the tobacco and helebore six quarts more of soft water, and boil until reduced to four quarts; strain, and add it to the other decoction. Then add sulphate of zinc (white copperas) one pound and a half, spirit of turpentine two quarts, corrosive sublimate four ounces, dissolved in eight ounces of spirit of salts, and mix the whole together for use.

It would be advisable to add the turpentine when you bottle off a certain quantity for use, as the turpentine soon separates, and there is great difficulty in mixing it properly with the liquor. Three ounces of turpentine is the proportion to each imperial quart, and every time it is used let it be well shaken, so as to have the turpentine properly mixed. The method of using this valuable preparation, is first to remove the loose wool, if any, and take the lie of wood ashes, and with a shoe-brush let the part be well rubbed with the lie so as to break the scab; then let a sufficient quantity be well rubbed on the affected part every second or third day, for three times, after which leave off; and should the disease be not quite removed, let the sheep be dressed in the same manner again, bearing in mind to keep the infected from those which are not infected: and let them be dressed in dry weather. The cure in a measure depends on the shepherds' properly dressing them, for without proper care and attention in the preparation and use of the liquor, the sheep will not be cured in desperate cases. This mixture will be found very effectual, and not the least injurious to the wool. Some shepherds open the wool and make a streak down the back, and from thence down the thighs and ribs, and dress them there also, which I have no doubt prevents the spreading of the disease.

The fine-wool sheep, and particularly the rams that are exhausted by covering, are more subject to it; and in the fine-wool flocks it is also more difficult to cure. It spreads not merely by the contact of one sheep with another, but by their

lying upon the same ground, or rubbing against the same post.

The following ointment may be used by those who prefer it to liquid preparations.

Take Ungt. Hydrargyri Fortius (Strong mercurial					
Ointment)	..	..	..	..	1 pound.
Hog's Lard	..	..	..	..	2½ "
Resin	..	..	..	..	4 ounces.
Oxymuriate of Mercury	..	..	..	..	1 "

Dissolved in one ounce of muriatic acid. Let the strong mercurial ointment, hog's lard, and resin, be melted first over a gentle fire; then pour it into an earthen vessel of a sufficient size, and gradually add the mercury previously dissolved in the acid, and keep constantly stirring it until nearly cold.

Some persons are in the habit of making the strong mercurial ointment themselves; but inexperienced persons should not attempt to prepare an article which they are not acquainted with: they should obtain the Unguentum Hydrargyri Fortius, or strong mercurial ointment, from a respectable chemist and druggist; for if the quicksilver is not properly oxydized, it will either not be of any service, or produce the most direful effects.

Shepherds in many parts of the kingdom have but little knowledge of the proper method of using this ointment, for want of which the life of the animal is often in danger. It will therefore be necessary for every shepherd to know the quantity that may be used with safety.

One pound of the ointment will be sufficient to dress eight sheep of a moderate size, for the scab; and if slightly infected, it will suffice from that number to twelve. Many farmers and graziers dress all their sheep and lambs every year, whether infected with the scab or not, as it destroys filth, promotes health, and causes them to thrive much faster. One pound is sufficient to keep them free from filth. The best method of using this to dress twelve sheep when used as a preventive to the scab, or ointment is as follows: Divide the wool on the back from the



head to the tail, so as to expose the skin from head to tail. Next divide the wool on each side, and rub the remaining part of the ointment well in. This is the general method made use of either in dressing sheep for the filth or scab. But different shepherds adopt various ways; some think it necessary to divide the wool down each shoulder, and likewise on the thighs, or on any part that may be infected with the scab.

The proper time for dressing sheep is in the month of October, choosing dry weather for the purpose. But the farmer often neglects to dress them at the latter end of the year, and in the spring he frequently finds them infected with the scab. They should not be dressed for this disorder too soon in the spring, but should first be allowed to have an increase of strength; and then, if the weather is dry and fine, it should not be suffered to pass. If the ointment should be too stiff, melt a little when using it, and add spirit of turpentine to it.

## SECTION VII.

### SHEEP-LICE AND TICKS.

Ticks and Lice are extremely hurtful to sheep; they often reduce their flesh by the pain they induce; and the sheep spoil their wool by their tangling and rubbing it against trees and fences. Lean sheep are frequently so covered with them as to occasion their death. They in every respect appear to be constant attendants on sheep that are struck with poverty.

A description of them from me is unnecessary, as all persons accustomed to sheep must have a knowledge of them. In order to destroy these vermin the following solution may be used.

## THE SOLUTION.

Take White Arsenic, in fine powder	..	1 pound.
Pearl Ashes .. .. .	..	4 ounces.
Soft Soap .. .. .	..	2 pounds.

Boil the two first articles in two gallons of soft water, till the arsenic is dissolved; then add the soap, and when it is properly mixed add eight or ten gallons more of water.

One pint of this water or wash will be found sufficient for one sheep. Divide the wool on the back from the head to the tail, so as to expose the skin; then take a part of the water intended to be rubbed on the sheep, and rub it well on the skin from head to tail. Then divide the wool on each side, and rub the remaining part of the water well in. Such persons as are in the habit of dipping their lambs may use the following solution.

## THE SOLUTION.

Take White Arsenic, in powder	..	..	2 pounds.
Pearl Ashes .. .. .	..	..	$\frac{1}{2}$ "
Soft Soap .. .. .	..	..	4 "

Boil the arsenic and ashes in three or four gallons of water, until the arsenic is dissolved; then add the soap, and when it is dissolved pour the water into a large tub, and add water to reduce it to a proper strength to kill a tick in one minute;—if any weaker it will not answer the purpose. The sheep or lambs should be immersed in the solution, taking care to have the head above the water. Sheep should be put into another tub, or be so fixed with a board in the tub that the liquor can be pressed out with the hand, and returned into the tub again. By this method a considerable number can be dressed in a short time.

I have lately tried the following method, which will entirely destroy the tick;—it is easy in the application and attended with no danger. Take a pair of bellows, to the nose of which a pipe must be affixed, capable of containing a handful of tobacco—(the small from the tobacconists' will do)—set fire to the tobacco, and while one man holds the sheep between his knees, let

another open the wool, while a third blows the smoke into the fleece ; close the wool on the smoke, and open another place a few inches from it, and so go over the whole sheep, blowing also under the belly and between the legs : in twenty-four hours every tick will be killed. The whole operation may be performed in a few minutes.

## SECTION VIII.

### INFLAMMATION IN THE UDDER OF EWES.

THIS complaint is frequent among ewes at the time of yearning. Those that have been high fed for some time before they bring forth are the most subject to this complaint, as it generally causes a flush of milk at that time ; and from the glutinous state of the first milk, and also from its being long retained in the udder, it partly closes up every passage and soon brings on inflammation in that part, unless proper care be taken to prevent it.

At the time of lambing ewes should have their udder examined by the shepherd. If their milk pass freely from them, on pressure of the finger and thumb, there is little danger of inflammation in those parts : on the contrary, should the udder be tumefied, and should there be no passage for the milk in its regular channel through the teats, these parts being glued up with the glutinous quality of the first milk, it is frequently found necessary to introduce a small knitting-needle up the regular passage into the udder (but this requires proper care and attention lest a new passage be forced) ; after which the milk may be discharged with ease. Then let the swollen part be well rubbed with the following mixture.

## THE MIXTURE.

Take Olive Oil	..	..	..	..	4 ounces.
Extract of Lead	..	..	..	1	"
Camphorated Spirit of Wine			..	1	"
Spirit of Turpentine	..	..	..	1	"
Spirit of Hartshorn	..	..	..	1	"
Soft Soap	..	..	..	2	"

Let the ingredients be mixed in a marble mortar with the soap, and then put them in a bottle for use. After the milk has been drawn from the udder, rub the above oils on the part affected, and let this be done twice a-day, first fomenting it with hot water. It will be found extremely useful in all cases where obstructions are formed in the lacteal vessels. But if the tumour should increase and proceed to suppuration, it will be requisite to open the part with a lancet, and then dress it in the same manner as horned cattle. (See Section xxvi. on wounds, or the oils there ordered for putrefaction or gangrene.)

## SECTION IX.

## THE FOOT-HALT, AND FOOT-ROT.

THESE diseases in the feet of sheep appear to proceed from the same cause, viz., wet pastures ;—yet if any persons wish to make any distinction it may easily be done by considering the the first stage of the disease as the foot-halt, and the last as the foot-rot. All persons accustomed to sheep must be acquainted with this disease. The cure will easily be effected if the following rules be observed. It is first discovered by the animal's walking lame. Such sheep as are infected with this disease should be taken from their pasture and put in a dry fold-yard : after they have stood for an hour or two, take a brush (such as is used for cleaning teeth) and brush all the dirt from between

the claws; after which take a wooden skewer, dip it in butter of antimony, and anoint the diseased part all over: after which let them stand dry for one hour. If they are properly dressed one application is generally sufficient to perform a cure, except in cases of superfluous flesh, when it must be repeated every third or fourth time, for a few times. If the disease is not checked by these means, but in every respect appears worse, and much superfluous flesh grows out between the claws, the best and most expeditious way in this case will be to cut it off with a sharp knife, taking care to cut off only the superfluous parts. The operator should previously be provided with pledgets of tow, old linen, and a long piece of tape: he may then proceed to dress the wound with the following powders.

#### THE POWDERS.

Take Blue Vitriol	..	..	..	..	1 ounce.
White Vitriol	..	..	..	..	1 "
Burnt Alum	..	..	..	..	1 "
Bole, in powder	..	..	..	..	$\frac{1}{2}$ "

Powder and mix the whole together for use.

#### ANOTHER RECIPE.

Take Oxymuriate of Mercury	..	..	..	2 drachms
Sulphuric Acid	..	..	..	2 ounces.

Mix in a bottle for use.

To be used in every obstinate case in the same manner as the butter of antimony. I have known sheep cured in one or two days with the following remedy:—half an ounce of saltpetre, ditto of common salt, ditto of blue vitriol (sulphate of copper) pounded in a glass mortar, and five ounces of strong vinegar, three ditto of spirit of turpentine; shake the whole well together: wash the feet of the sheep in soap-suds till they are very clean; wipe them dry, and then apply the remedy by dropping it between the claws, (the sheep being laid on its back,) and passing a linen rag saturated with it between the hoofs. Keep it twenty-four hours on a dry floor.

## SECTION X.

## THE SCOUR, OR DIARRHŒA.

PURGING or Diarrhœa in sheep is produced by turning them into pastures in the spring of the year, and by their lying on the wet ground after being turned out of their dry folds. This is in general a malady of little consequence, and perhaps is salutary upon the whole, if not too great or of too long continuance. It seldom continues longer than a few days. I conceive that folding in their winter cot upon dry litter, for a few nights, with a little hay and grain, would check it: to this may be added salt, mixed with any absorbent earth, which the sheep will very readily eat. If any are so much affected as to be weakened by it, and the disorder does not yield to those remedies, a dose of castor oil and housing with dry food, particularly a crust of dry wheat bread, will generally restore them. Sometimes this disease proceeds from bad and scanty keep during the winter season, and is more difficult to cure than the other. In Wales it destroys great numbers of sheep: and the disease, if suffered to remain long, will affect the sheep in the same manner as a beast labouring under the last symptoms of diarrhœa or rottenness. In such case let the above treatment be strictly adhered to, and give the following.

Take Peruvian Bark, in powder	..	..	2 drachms.
Ginger, in powder	..	..	1 "
Prepared Chalk	..	..	1 "

Mix for one dose. These powders may be given in a little warm ale once or twice to such sheep as are in danger, with a small tablespoonful of gin or brandy added to it. In very severe cases a teaspoonful of tincture of opium may be added to each dose. The following preparation may be administered if the above should fail, which is seldom or never the case.

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Take Cascarilla Bark, finely bruised	..	1 ounce.
Boiling Water	.. ..	1 pint.

Cover it over, and infuse for three hours by the fire; strain and add calcined sulphate of iron two ounces, Cape aloes in powder once ounce, ginger in powder half an ounce; mix the whole together, and let one tablespoonful or more be given twice a-day for a few days. Should the disease still continue, commence again in a few days afterwards.

## SECTION XI.

### TO PREVENT THE FLY'S STRIKING SHEEP AND LAMBS.

SHEEP and Lambs during the summer, especially in hot sultry weather, are constantly troubled with flies, particularly those kept in lanes or woody districts. They give the animals so much trouble at times as to cause them to run into hedges and the bottom of dykes and ditches, to the great injury of their pelts and fleeces. They also prevent their feeding, at a time when they ought to make the greatest progress. Many preparations have been offered to the public in order to prevent the fly from striking sheep, but many of them are very injurious to the sheep and wool. The following is the best that can be prepared.

Take Sulphur Vivium	.. ..	1 pound.
Flower of Sulphur	.. ..	1 "
White Lead, in fine powder	.. ..	1 "

Animal Oil a sufficient quantity, but not so much as to prevent its coming through the dredger.

The above preparation has been used in the counties of Hereford, Worcester, and elsewhere, possessing the valuable properties of securing sheep and lambs from being struck with

the fly ; it will also quickly heal shear-galls. It is not the least injurious to the finest fleece, and will be found the best and cheapest preparation in use.

#### DIRECTIONS FOR USING THESE POWDERS.

First. Let one man take hold of the sheep by the head, and another take the powder in a flour-dredger in his right hand, and a stick in his left ; then draw the stick gently from the head to the tail, and with the other hand dust the powders close after the stick. The utility of the stick will be seen from its pressing down the wool while the powders are dusted on, and as the wool rises it shakes and spreads the powders. Next take a small watering-pan, and sprinkle a small quantity of water from head to tail, and draw the stick backwards and forwards two or three times, by which the powders will be made to adhere to the wool. One pound of these powders will dress one dozen sheep or more.

## SECTION XII.

### SORE HEADS.

THIS is a common complaint during the summer season, more particularly among sheep that run in lanes and woody districts. They are teased with flies about the head, which cause them frequently to strike the hind feet against it until a wound is made ; and if no remedy be applied it will be dangerous. Those who look after sheep at this season of the year should always have with them a bottle of animal oil, and as soon as they discover a sheep with a sore head they should drop or pour as much of it on the wound as will spread all over it, and it will both heal the wound and prevent the flies from teasing the sheep. Or either of the following ointments may be used.



## THE OINTMENTS.

Take White Lead, ground in Oil .. ..	1 pound.
Flower of Sulphur .. ..	$\frac{1}{2}$ "
Hog's Grease .. ..	$\frac{1}{2}$ "
Train Oil .. ..	$\frac{1}{2}$ pint.
Animal Oil .. ..	3 ounces.

If this ointment should be too thin, let more flour of sulphur be added. This ointment should be spread on the head and secured in the manner as stated below.

## ANOTHER.

Take Black Pitch .. ..	2 pounds.
Common Tar .. ..	2 "
Resin .. ..	1 "
Animal Oil .. ..	3 ounce.
Oil of Vitriol .. ..	1 "

Melt the pitch, resin and tar, in an iron pot or pan, and boil it over a slow fire, then add the animal oil; lastly, remove it from the fire and gradually mix well in the oil of vitriol.

The best method of using this preparation is first to procure a sufficient number of leather caps for as many sheep as you intend to cap: any kind of soft leather will answer the purpose: if you have no leather, strong brown paper will do. These caps must be cut in a proper shape for laying on the head. When the preparation is melted spread it thick upon the leather with a paint-brush, and when near setting, apply the cap to the head. The evening is the best time for capping sheep, as there is less danger of knocking the caps off, and before morning they will set fast.

## SECTION XIII.

## MAGGOTS.

THERE are few if any flocks of sheep which are not subject to this kind of vermin during the summer. They either are or

ought to be well understood by every shepherd. As soon as the maggots make their appearance the wool on the part affected becomes moist and wet; the sheep hold down their heads, shake their tails, and run about from place to place, and if permitted to continue in that state many days they will fall victims to this kind of vermin. The following mixture will destroy maggots in the worst of cases; it will be found the best and cheapest in use.

#### THE MIXTURE.

Take Corrosive Sublimate	..	..	1 ounce.
Spirit of Salts	..	..	2 "
Boiling Water	..	..	3 quarts.

Put the whole in a bottle, and add spirits of turpentine one quart; mix and well shake it every time it is used. The proper method of using this mixture is as follows:—Shake the bottle well, and instantly fill a quart bottle with it before the turpentine has time to separate; cork up the bottle, then bore a hole through the middle of the cork and pass a goose-quill, cut open at both ends, through the middle of it; by such means a proper quantity may, without much waste, be forced out on the part affected; and if a few drops of animal oil be dropped or poured on the part just dressed, it will prevent the fly from striking a second time.

### SECTION XIV.

#### DEBILITY AND INDIGESTION.

SHEEP are frequently attacked with these complaints during the summer season, which in general are brought on by fatigue through over-driving, and sometimes by overloading the stomach with herbage. In such case nature requires something to rouse

and stimulate the action of the stomach and intestines, so as to invigorate the system. The following will be found adapted for the cure.

Take Caraway Seeds	..	..	..	$\frac{1}{2}$ ounce.
Anise Seed, fresh powdered	..	..	..	$\frac{1}{2}$ "
Gentian Root, in powder	..	..	..	1 drachm.
Peruvian Bark, in powder	..	..	..	1 "
Ginger, in powder	..	..	..	$\frac{1}{2}$ "

Mix, and give it in a little warm ale. This drink may be repeated once a-day if required.

## SECTION XV.

### INFLAMMATION.

SHEEP, as well as other animals, are liable to be attacked with inflammatory disease during the hot weather in summer, particularly those which, when fat, are driven a considerable distance to market. This disease attacks various parts of the body, as the stomach, intestines, kidneys, bladder, &c. Sheep when first attacked with inflammation in any of these parts should be bled; afterwards give the following drink.

#### THE DRINK.

Take Epsom Salts	..	..	..	2 ounces.
Nitre, in powder	..	..	..	2 drachms.
Ginger	..	..	..	1 "
Treacle	..	..	..	2 ounces.

Put the whole into a pitcher, and pour four ounces of boiling water upon it; stir it together and give it when lukewarm. Or the following may be given if thought proper.

Take Castor Oil	..	..	..	2 to 3 ounces.
according to the size of the sheep.				
Nitre, in powder	..	..	..	2 drachms.
Salt of Tartar	..	..	..	1 "
Ginger, in powder	..	..	..	1 "

Mix, and give it in warm gruel.

Either of the preceding drinks is generally sufficient to evacuate the stomach and intestines ; if not, it may be repeated once a-day until it has the desired effect.

## SECTION XVI.

### WOUNDS.

WOUNDS are not so common among sheep as among other cattle, except those occasioned by dogs, which frequently occur near large towns, and often do considerable damage. The following mixture should always be kept in readiness against accidents of this kind, by which many a life will be saved.

Take Linseed Oil	..	..	..	1 pint.
Spirit of Turpentine	..	..	4 ounces.	
Compound Tincture of Myrrh	..	..	4 "	
Spirit of Wine	..	..	2 "	
Oil of Vitriol	..	..	2 "	

Put the Linseed Oil into a pot, and add the Oil of Vitriol by a little at a time, constantly stirring it until united ; then add the other ingredients.

Mix them well together, and put them in a bottle for use. These oils will effectually prevent putrefaction or mortification if applied in time : they are also proper for all kinds of wounds and bruises in horses and horned cattle, as well as for ewes torn during yeanning. Let the parts be rubbed with them once a-day.

## SECTION XVII.

### THE DISEASE OF THE EYE, COMMONLY CALLED BLINDNESS.

THIS disease is in many instances epidemic, whole flocks being affected with it at once. It sometimes arises from hard driving, or exposure in a bleak situation. It has frequently

made its appearance at the latter end of the year, and has often affected sheep in the best condition. Bleeding has by many been greatly recommended for diseases of the eye; and, where it can be done with safety, there is no doubt of its great utility. It may be effected by opening the angular vein of the eye, and holding the animal's head in an inverted position. This moderates the increased action of that part which is the immediate cause of inflammation. In most diseases of the eye that are attended with inflammation, bleeding will doubtless be found to give instant relief, especially when performed near the seat of the disease. In cases of this kind the following will remove the inflammation and restore the sight.

## THE MIXTURE.

Take White Vitriol	..	..	..	1 ounce.
Nitre, in powder	..	..	..	1 "
Common Salt	..	..	..	6 drachms.

Put the ingredients into a bottle, and add to them a quart of warm soft water, and mix for use.

A small portion of this may be poured into the eye, or a little of it may be put into the eye with a feather. This remedy has been prepared and recommended for years for blindness in sheep, and it has not been known to fail in curing.

## ANOTHER.

Take White Vitriol	..	..	..	1 ounce.
Calomel	..	..	..	2 drachms.
Spirit of Camphor	..	..	..	$\frac{1}{2}$ ounce.
Soft Water	..	..	..	1 quart.

Mix for use. This may be used twice a-day, as in the former; but in slight diseases of the eye, two ounces of either of these mixtures will be sufficient for half a pint of water.

## SECTION XVIII.

## HOVE.

SHEEP turned into clover too suddenly, and with empty stomachs, are sometimes inflated with wind in that organ, the orifice of which is stopped by the food they take. This the farmer calls being hove. All ruminating cattle are subject to it. On being affected with it they swell very suddenly, and unless speedily relieved, they die. Several remedies are prescribed for this disease; the first and most effectual is to plunge a knife into the paunch. The sheep will swell most on the left side, and a part of the swelling will be very protuberant below the hip-bone. Into this protuberance plunge a knife, sharp at the point and dull on the edge, so as not to cut unnecessarily sideways. The depth must be regulated by the degree of swelling; there is little danger of going too deep, and the knife must enter the stomach to be successful. The aperture must be kept open till all the wind is discharged, which will be in a few minutes. Another remedy is to take a piece of grape vine, with a natural or artificial knob at the end, covered with cloth or leather, and to thrust it down the throat into the stomach; this will open the aperture, and the wind will be discharged. Instead of these surgical operations chemical remedies should be first tried, if there be time for it. A pint of linseed oil has been successfully given, or a solution of common pot-ash or lie: both of these will combine with the carbonic acid in the stomach, and will effect a cure if given in sufficient quantities to absorb the air. Or the following may be given.

Take Tincture of Asafetida	..	..	3 drachms.
Rectified Oil of Amber	..	..	2 "
Gum Camphor	..	..	1 "
Salt of Tartar	..	..	2 "
Spirit of Turpentine	..	..	1 "

Mix, and give one half immediately, and repeat the other in two or three hours afterwards in a little gruel.

## SECTION XIX.

## COLD, AND ITS CONSEQUENCES.

WHEN Sheep are very ill kept, or when they lie upon damp ground in the spring and autumn, they are subject to colds, which appear by the discharge of mucus from the nose and eyes, and sometimes blindness ensues. The cure is warmth, dry litter, and good food. Some sheep have at all times this discharge from the nose; but upon examination they will generally be found to be old, and should be fattened as soon as possible, as they disfigure a flock, and do not pay for keeping. The best remedy is as follows.

Take Dover's Powder	..	..	..	1 drachm.
Camphor	..	..	..	1 "

Mix, and give it in gruel, and repeat it every second or third day until the sheep is well. In giving this medicine it will be necessary to take the sheep in over night, and not turn them out till noon on the following day.

## SECTION XX.

## METHOD OF BLEEDING SHEEP.

In inflammatory disorders bleeding may be necessary. This is performed by cutting the ear, or the tail, or in the temple. The first and last methods do not yield much blood, and cutting the tail leaves a considerable wound. Bleeding in the lower part of the cheek is strongly recommended, at the spot where the root of the fourth tooth is placed, which is the thickest part of

the cheek, and is marked on the external surface of the bone of the upper jaw by a tubercle sufficiently prominent to be very sensible to the finger when the skin of the cheek is touched. This tubercle is a certain index to the angular vein which is placed below ; and this vein extends from the under border of the jaw beneath to the cavity of the eyebrow. The shepherd takes the sheep between his legs, his left hand more advanced than his right, which he places under the head, and grasps the under jaw near to the hinder extremity, in order to press the angular vein, which passes in that place, to make it swell ; he touches the cheek at the spot nearly equidistant from the eye and the mouth, and there finds the tubercle which is to guide him, and also feels the angular vein swollen below this tubercle ; he then makes the incision from below upwards, half an inch high in length, below the middle of the projection, which serves to guide him.

Having concluded my remarks on the treatment of the various symptoms of disease to which sheep and lambs are subject, I shall make the following not unimportant observations:—

Signs of health in sheep are first a skittish briskness, clear azure eye, florid ruddy eye-strings and gums, teeth fast, breath sweet, nose and eyes dry, respiration free and regular, feet cool, dung substantial, wool fast and unbroken, skin of a fine florid red, particularly on the brisket.

Choice of Rams.—As this is an object of much moment in forming a flock, it will be well to know the opinion of different agriculturists. Columella recommends that the ram be tall, with a pendant woolly belly, a long tail, thick fleece, broad forehead, twisted horns, (though if without horns still better,) and large testicles ; not to be put to ewes till three years old, and not after eight.—Markham :—“ The ram large in every general part, with a long body and large belly ; forehead broad, round, and well rising ; a cheerful large eye, straight short nostrils, a very small muzzle, by no means any horns, for the hornless are the best breeders, and do not endanger the ewe as the horned do ; a



large upright neck, somewhat bending, like the neck of 'a horse, a very broad back, round buttocks, a thick tail, and short-jointed legs, small, clean, and nimble; his wool should be thick and deep, covering his belly all over, also his face, even to his nostrils, and so downwards to his knees and thighs." One would conclude from this description, that Markham, who wrote in the reign of Elizabeth, had copied from one of the Spanish rams imported by Edward the Fourth, for no sheep in England answer to his model.

Season of Lambs' Falling, and Food.—The season for putting tups to ewes depends upon the time it is wished to have the lambs fall. The tups should be well fed in the season; barley and peas ground together should not be spared. I prefer myself to make them, or even wheat, corn and rye, into bread, and give the ram a slice three times in the day. This is more convenient than giving loose corn, because if your ram is as tame as he should be, he will receive it from the shepherd's hand, so as not to render it necessary to take him up to be fed, which is attended with a great deal of trouble. A small quantity of oats or barley in troughs, scattered over the clear sward, from whence they will pick it up in single grains, will bring the ewes in heart (if they have no lambs) at any season that may be required. If the flock consists of aged ewes, with moderate care it will at least double annually. If a considerable proportion are ewes that have their first lambs, no care can prevent a loss of at least fifteen per cent. on young ewes, unless indeed the flock is very small.

Salt was considered by the Spanish shepherds as essential to the health of sheep, and this opinion is very general in every part of Europe except in England, whose situation renders the air sufficiently salt. Upon Long-Island, and elsewhere near the sea, the cattle require no salt, nor do they manifest any desire for it; whereas, on the north of the Highlands they eat it ravenously, and it is thought essential to their health. The ancients also entertained similar sentiments on this subject.

Aristotle prescribed a peck of salt every five days during the summer, to one hundred sheep. We should consider this as a large allowance, but it would be readily eaten. They also observe, that however good your pastures may be, the sheep will tire of them if not changed, unless their appetites are kept up by salt.

Wool.—How to produce the best quality.—It may be proper to mention that British agriculturists are generally divided on this question of how far the wool is affected by the high or low feeding of sheep. The wool-staplers assert, that the sheep running in rich pastures, or fed on turnips, have coarser wool than if more sparingly fed. Dr. Parry, on the contrary, asserts that it is not the feed, but the change of breed that has altered the staple of the wool: as land improves, and is enclosed and cultivated, he says, that the cultivator naturally prefers larger bodied and longer wooled sheep, and that the purchaser of wool observes a change in the wool of his old dealers without knowing the cause, and thence has been led to attribute it to a false one. The contrary, however, seems to be the prevailing opinion in England. Lord Somerville agrees with Dr. Parry in asserting that merino wool is at least an exception to this rule; that it is not injured but rather improved by good keeping. With respect to my own experience, I can say I have known sheep well kept whose fleeces have greatly improved in weight, and certainly not retrograded in quality. The sheep were better kept the last year than the year preceding, and their wool spun better, and was stronger and finer than it was the previous year. Luccock supports the opinion that high and short pastures produce the best wool, and mentions another fact which deserves investigation:—he insists that the moisture injures wool by washing out the yoke, which is a secretion, found most copious in fine-wool sheep. I think this not improbable: from the experiments I have lately made, it consists of oil and pot-ash; and of course, like other soap, must be soluble in water. Wool that is dry and without this substance, is seldom fine or good.

In the north parts of Britain, where sheep are exposed to very severe weather, they are anointed on the approach of winter with salve, composed of butter, with about one-twelfth of tar. This is rubbed upon the skin from head to tail, and so over the whole body, the wool being opened in lines two inches apart; this acts as a repellant to the water; and Luccock (who appears to have an intimate knowledge of the subject) says, that the wool that grows after this operation is much softer, finer, and fuller of yoke, than that which grew earlier in the season before the mixture was applied: this, however, is not conclusive evidence of its advantage, since the wool that grows in summer is always coarser than that which is produced after the frost sets in; and for that reason the extremities of all wool is harsher than those parts that are not exposed to the air. From thence probably arose the custom among the Romans of clothing, even in their temperate climate, the fine-wool sheep, which tended not only to preserve the yoke from being washed out, but also to shield the fleece from the influence of the air and sun. Backwell, another scientific writer on wool and sheep, recommended greasing after they are shorn, as well as salving them in the autumn, and asserts positively that this renders the wool finer and softer. He insists much upon the softness of the wool as a very important quality, and alleges, that though two samples of wool may be equally fine, that which is softest will make much the best cloth. The experiment of greasing sheep after shearing is therefore deserving of attention. It is alleged that limestone pastures have a tendency to render wool harsh, and that the purchasers of wool in this country make a difference in the price of wool bought from adjoining farms, if one is sand or clay and the other limestone or chalk; the latter decomposes the yoke, where it comes in contact with it.

Terms applied to Age of Sheep :—A small lamb, after he is weaned, is called during the first year a hog or hoggit; a tag ewe lamb, during the same period, is called a ewe tag or gimmer. In the second year the male is a shear hog, or a two-tooth hog, or

tag ; the female, a thaive, a gimmer, or two-tooth ewe tag. In the third and fourth year they are distinguished by the same names, with the addition of the number of teeth they have changed. The fifth year, having eight broad teeth, they are called full-mouth sheep. The age of rams is generally denoted by the number of times they have been shorn : the first shearing being in the second year—a shearling—one shear—two shear,&c. In the North of England and Scotland, a ewe lamb, after weaning, is called a Dimmont; and in the west of England ram-lambs are called pur-lambs. Tup is a synonymous term for a covering ram. Crone signifies an old ewe.











